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Addresses.

THE OPHTHALMIC SECTION.*

HOW MAY IT DO THE MOST EFFECTIVE WORK?

CHAIRMAN'S ADDRESS.

BY CASEY A. WOOD, M.D.

CHICAGO.

As you are well aware, the By-Laws of the ASSOCIATION direct that the chairman of each Section shall prepare an address on recent advancements in the particular department of medicine over which he has been elected to preside, or to make suggestions in regard to possible improvements in methods of work. I have this year chosen to address you on the second of these subjects, because it occurs to me that while the story of the last year's progress in ophthalmology is a tale oft told by numerous journals, text-books and monographs, and readily accessible to all of you, the experiences of your executive committee, secretary and chairman in providing for a continuance of the successful meetings held in the past may be new to most of you and well worth recounting. It is in the hope that a frank recital of these will issue in the consideration of some means whereby improvements, not only in the methods, but in the quality, of the work done by this Section, may be brought about.

It must not be inferred from this that the scientific and practical value of the papers read before this branch of the ASSOCIATION can be justly regarded as inferior to those presented to similar societies elsewhere. On the contrary, it is rather with an embarrassment of riches in this respect that we have to deal. For example, under the able and discriminating leadership of my distinguished predecessor, Dr. Harold Gifford, fifty-six titles were placed on the program. This year we have fifty-eight, and I believe I am well within the mark when I state that quite seventy-five papers, ranking well above the average in interest and value, might have readily been obtained for this meeting. The latest official roll-call of the ASSOCIATION shows that there are about 375 members who are especially interested in ophthalmology, and it is not too much to claim that one-fifth of these are as competent to observe, as capable of giving and as willing to furnish us with the valuable results of their studies, as any similar body in the whole realm of ophthalmology. I will freely confess, however, that I regard fifty-eight (or even fifty) as too large a number of papers for one meeting. In the first place, a superabundance of material necessarily limits the time allowed for the presentation of each paper. The number of hours for the scientific portion of the program being strictly prescribed by the By-Laws, the time possible for each reader is in inverse ratio to the number of contributions. You will remember that at the previous meeting it was considered necessary, and I think properly so, to restrict each reader to ten minutes, without regard to the character of his paper. A report of a case or two that might, with propriety, occupy that amount of time, or less, was placed on a par with essays dealing with subjects that in their very nature require at least twenty minutes or half an hour for intelligent delivery. With an ever-increasing membership (at least 400 this year) the problem of arranging future programs becomes a most serious matter and while this may well continue to be the particular task of your chairman, the whole Section is vitally interested in, and will be greatly affected by, the *manner* in which it is done. In any event, we have come to the parting of the ways. Henceforth, it will be physically impossible—and very probably undesirable even if it were possible—to read and discuss all the papers that, in the ordinary course of events, will be offered to this Section. How, then, shall the program be filled, and whose is to be the responsibility of selecting some and rejecting others? In the absence of any definite instructions from the Section on this point, the chairman's work must grow more difficult and embarrassing every year. Judging from my own experience, I am sure that your executive officers would be glad to receive and carry out the suggestions of the majority. After giving the matter much thought, and in the light of my own investigations, I would suggest that the papers be limited to forty, of which fifteen be contributed by members, on invitation of the chairman, while the remaining twenty-five be volunteer contributions, selected by the executive or other committee—with the chairman and secretary as ex-officio members—from the titles sent in before a certain date. This plan has proved successful in other representative societies. It is vital to the carrying out of this plan that the Section should grant its executive power to allow, at his discretion, an extension of the time for reading some particular paper to the limit permitted by the ASSOCIATION By-Laws, the number of minutes so allowed to be printed on the program with the title.

By no means the least valuable portion of our program is the discussion that is expected to follow the reading of the papers. If the title of a paper was always a sufficient indication of its contents, members interested in the subject would require nothing more to enable them, at the proper time, to confirm the experiences or controvert the opinions therein expressed. As it is, we are usually left in the dark as to the subject really under discussion until the paper is read to the Section. Few of us possess such phenomenal memories that we can at once recall the details of cases—stored in case-book and note-book—bearing on the matter at issue. I have long believed that each contributor to our program, should, as early as possible, send a brief extract of his paper to the secretary. Copies of this should be made and forwarded, not only to members appointed to discuss the paper, but to any others who may ask for them. In this way the value of the proceedings will be much enhanced—to the reader, to the critic, and to the audience.

* Presented to the Section on Ophthalmology at the Fiftieth Annual Meeting of the American Medical Association, held in Columbus, Ohio, June 6-9, 1899.

Intelligent limitation of the number of papers will not only prevent unseemly haste in the presentation of the papers, and allow of reasonable time for their discussion, but it will make possible such variations in the usual program as may, from time to time, seem desirable. For instance, I have this year, after consultation with your executive committee, invited a distinguished French ophthalmologist to address you on a subject with which he is peculiarly competent to deal. In the same way, at my invitation, two Americans, gentlemen equally well known to us, have consented to give addresses on topics of much interest. Personally, I am much in favor of joint discussions with some other Section of subjects of common interest, and this year, at the suggestion of Dr. Mayer, have helped to arrange a symposium with the Section on Laryngology and Otology. By no means the least valuable of the results that flow from such an arrangement is the emphasis thus placed on the fact—by some forgotten—that ophthalmology is not a science apart from, but is merely one branch of the tree of, medical learning.

It has been suggested to me that, instead of the ordinary symposia, a subject of importance should be announced for general discussion at the close of one session, to be taken up the following year. This plan has been adopted by our sister society, the British Medical Association, and may well have our consideration.

Another project, to the accomplishment of which I have given much thought, might, perhaps, profitably receive some of the attention and occupy a portion of the time at our disposal. I refer to the investigation by the Section of the value of those remedies, methods of examination, etc., which are so frequently recommended by ophthalmologists here and elsewhere. The virtues of many of these are often heralded by a flourish of trumpets, and sometimes promoted by publications in the medical press and by makers of medical instruments or wholesale drug houses having a commercial interest in their successful sale. I do not say that such agents are necessarily without virtue, but statements concerning them, thus exploited, may well be received *cum grano salis*. Even sincere partisans of new methods of treatment are ofttimes led to overestimate the value of the remedies in question. On the other hand, we know that not a few useful additions to our pharmacopeia long remained in undeserved obscurity, mainly because their virtues were not early and sufficiently put to the test. In the midst of such uncertainty, how shall the individual observer find the truth? It certainly seems as if this Section possesses qualities that eminently fit it for the task of separating the wheat from the mass of therapeutic and other chaff yearly offered to us. It is a truly representative body, of wide influence, of vigorous growth and, moreover, comprises members with the most conservative as well as the most radical leanings. It would be difficult to obtain at the hands of committees appointed at each meeting unbiased reports on the efficacy of such agents, remedial and other, as at the time appear to be worthy of investigation. As a few examples of these that seem to me to call for such investigation, may be mentioned protargol, argentamin, suprarenal capsule, McGowan's method of ripening and extracting immature cataract, the relative merits—as local anesthetics—of eucain (alpha and beta), holocain and cocain, the removal of the tarsus in the treatment of deep-seated trachoma, the value of portable ophthalmometers—Reid's, for instance—and the sideroscope of Asmus. Reports, from proper committees representing a year's work in hospital and private practice, would not only be of the greatest value to every member of the Section, but would command respect from ophthalmologists everywhere. They would not only add to the prestige of our Section and increase its influence, but they might well form one answer to that vague insinuation, occasionally made by those who do not know us, that Americans are so prone to cast side glances at the financial aspect of medicine, that they fail to maintain a steady gaze upon the more important landmarks of our profession—that we are "practical" rather than scientific. Evidence of the American's ability to hold his own in the field of scientific research connected with ophthalmology continually multiplies about us, and there is no reason why the ASSOCIATION, to which we are proud to belong, should not do its fair part in the friendly strife for pre-eminence.

PRACTICE OF MEDICINE SECTION.*

CHAIRMAN'S ADDRESS.

BY FRANK BILLINGS, M.D.

CHICAGO.

The officers of your Section present you with a program, the chief fault of which is its length, and an attempt has been made this year, and we believe the first of its kind in any of the Sections of the AMERICAN MEDICAL ASSOCIATION, to present synopses of the papers which will be read.

It has been difficult to obtain these abstracts, but I think we may feel that the attempt has been successful enough to show its desirability and to establish it as a custom in this Section. No one will deny the importance of the publication of the synopses of the papers which are to be read, inasmuch as the members thus have an opportunity to acquaint themselves with the subject-matter of the papers and may prepare themselves for the discussion. One of the chief advantages of the presentation of papers before a body of medical men is the discussion which is elicited. It is difficult for any man to discuss with full intelligence and clearness a paper on a subject or on conditions which may be brought out by the writer immediately after the reading of such a paper, unless he shall have had the opportunity to become acquainted with the chief points which the writer discusses.

We have succeeded in presenting fifty-four abstracts of the eighty-three papers on the program, and these synopses were published with the program in the JOURNAL more than two weeks ago, so it is probable that every one in attendance on this Section has had an opportunity to read an epitome of most of the papers which will be presented to you. We have reprints of the program with the abstracts of the papers for distribution during the meeting, which will, we hope, still further stimulate a discussion of the important subjects to be brought before you.

This Section should adopt a rule requiring every member who desires to present a paper at any future meeting to prepare and send to the officers of the Section a short synopsis of the paper, which may be printed in the JOURNAL, with the program, not later than the first week of May of each year. The great length of this program is a fault which, under the present rules of the ASSOCIATION, it is not within the power of the officers to correct.

Every member of the ASSOCIATION enjoys the priv-

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lege of presenting a paper before the Section on any medical topic, provided it is within the scope of this Section. This is a rule which is without doubt a fair one, but it must work to the disadvantage of the Section, inasmuch as a program which is too long will not allow a discussion upon the important subjects which they demand. It seems to me that a modification of this rule should be adopted which will give the officers of the Section the discretionary power of limiting the number of papers which may be read at any meeting. To give all an opportunity to present papers which may be published in the JOURNAL, by the recommendation of the officers of the Section, a rule which is in existence in other societies, and which could be adopted, would allow members to present papers, to be read by title only.

It seems to me also desirable that a certain class of papers should be favored. Original research should be stimulated, and especially in the direction of clinic work. Reports of cases with full reports on the clinic findings, and, when possible, supported by thorough post-mortem examinations, will be of greater value than papers on general subjects more or less theoretic in character.

This ASSOCIATION is composed of an immense body of medical men made up of the best talent of the country. There is no reason why the work done in the ASSOCIATION should not be equal to or better than the work of any other medical body. The large membership and its necessarily unwieldy nature must make it difficult to attain an ideal state, but if the program is carefully made up of selected papers, and if abstracts are required of all who read papers, it will finally become what it should be—the leading medical association of the country.

I appreciate fully the honor conferred on me in appointing me to the position of chairman of this Section, and I desire to express my thanks to you.

The innovation presented in the program and the recommendations which the chairman has taken the liberty to present to you in this short address are not given to you in any dogmatic spirit, but with the belief that the principles involved are important and that a great majority of the members of the Section are in sympathy with them.

In closing, I wish to add a word of public thanks to the secretary of the Section, who has been indefatigable in his efforts to formulate a program and to stimulate the co-operation of members everywhere to present papers to the Section.

100 State St.

THE CLEVELAND (Ohio) City Council, on June 19, passed an ordinance, "to prevent and limit the spread of certain dangerous infectious diseases in and by street-cars." It provides that any person or persons, while riding in or upon any street-car within the city, who shall expectorate or in any way deposit upon the floor, seats, or other parts of any street-car in use for transporting passengers any secretion, excretion, or discharge from the lungs, throat, mouth or nose shall be deemed guilty of a misdemeanor." The penalty for each offense is a fine of not less than $1 nor more than $10 with costs of prosecution. It is hoped that, in addition to ridding the street-cars of that intolerable and disgusting nuisance—the American expectorator—this legislation will have an educating influence on the public in regard to the care necessary to avoid the needless of infectious diseases.

Original Articles.

ACTION BY TOXIC AGENTS.

WHAT ARE THE PHYSIOLOGIC PROCESSES OR FUNCTIONS THAT IMPART TO THE LIVING HUMAN BODY ITS VITAL RESISTANCE OR IMMUNITY AND HOW CAN THEY BE AIDED BY THERAPEUTIC AGENTS.

BY N. S. DAVIS., M.D.
CHICAGO.

One of the important aphorisms of Hippocrates declares that "the physician is a servant, not a teacher of nature," and that in the treatment of diseases he should "follow nature." His declarations have been repeated and their wisdom extolled by all the more philosophic and learned members of our profession, from his time to the present. Therefore, we are reminded of the curative achievements of nature or of the *vis medicatrix naturæ*, in almost every medical work relating to diseases and their treatment. If, however, we are to follow Nature for the purpose of aiding her in resisting the influence of toxic agents, we must have some definite conception of what is meant by *Nature* in this connection; or at least, a correct knowledge of the processes she employs in resisting the impression of toxic agents and of expelling them after they have gained access and established the phenomena of disease. It is evident that the word Nature, so freely used in medical literature, is simply intended to personify the natural forces or functions by which a living body resists the impressions of foreign or toxic agents, and thereby prevents the development of disease or disorder; or after disorder has been established, still neutralizes or expels the disturbing agents and restores health. Just what these natural forces or functions are, but few practical writers attempt to explain. They simply claim that nature does this and that in preventing or curing disease.

Biologists, with the aid of modern facilities for minute and exact investigations, have resolved all living organized bodies into one essential prominent element, called by some persons bioplasm and by others protoplasm. The anatomist, with the aid of his microscope, finds this bioplasm segregated into minute organized bodies or cells, each capable of responding to the presence of food material by appropriating it to its own growth or multiplication; and of oxygen by yielding to disintegration or waste. We thus find the primary and distinctive function of all bioplasm to be a constant change in the atoms of which it is composed, produced by an affinity for such material as by addition constitutes nutrition or growth on the one hand, and, on the other, a similar affinity for oxygen, by which oxidation and disintegration are constantly taking place.

These constant changes in the bioplasm show that all animal life involves changes in the matter of which the living body is composed. They show, also, that these changes, which have been styled metabolism, take place under the guidance or control of laws or forces peculiar to living or vitalized matter—laws or forces derived from previous living bodies. Thus each cell or aggregation of bioplasm of which the living body is composed has been developed from a preceding cell and inherited the properties or forces of the parent cell from which it originated. It is by these properties that each bioplasmic cell is enabled to attract to itself and appropriate in definite positions such matter as is necessary for its nutrition or

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growth, and to reject all other materials. And it is this ability of organized bioplasm to appropriate or reject materials with which it comes in contact that constitutes one of the most important natural functions or processes for resisting the action of toxic agents of all kinds. In the lower and simpler animal organizations, it would seem to be the only means for perpetuating a normal existence. But when the bioplasmic cells are aggregrated in such a way as to constitute a variety of forms or structures, each having some special function, as in the more complex or higher animal organizations, each added special function brings with it some additional influence or mode by which toxic materials may be developed within or imbibed from without, and also additional means for their neutralization or expulsion.

Thus the mass of bioplasm that we call the germ or cell, if kept in contact with a proper temperature and food material, will simply maintain those metabolic changes that pertain to its own nutrition and growth. It simply imbibes what it needs and refuses or excretes all else. It has neither power of locomotion, variety of structures, nor complexity of function. In man, the most complex of animal organizations, however, we find the cell bioplasm aggregated into fibrous, muscular, nervous and secreting structures—all fed or nourished, it is true, from a common fountain, the blood, but the quality and quantity of that blood dependent on the natural activity of the digestion and respiratory organs and the quantity and quality of the materials with which these organs are supplied. If the digestive organs are supplied with only wholesome food material, and the respiratory with pure atmospheric air in normal quantity, the resulting blood-product will be normal so far as relates to furnishing material for the nutrition, growth and repair of every structure of the body. If, however, the food material or the air furnished is permitted to contain unwholesome or toxic materials, the blood will be very liable to become impregnated more or less, with the same, and thereby extend its disturbing influence to every structure and function of the body. But the blood is not only the fountain from which all tissues receive their material for nutrition, it is equally the primary receptacle of all the products of retrograde metabolism or waste. And to prevent it from becoming speedily toxic, special organs or structures are provided for the constant excretion or elimination of all such waste products, and such other disturbing elements as may have gained access from without.

By the foregoing elementary review, it is plain that the natural processes or functions which impart to the living human body its vital resistance, or, in other words, which constitute the *vis medicatrix naturæ*, are: 1, the inherent power of selection and rejection possessed by each cell or organized mass of bioplasm of which the blood and tissues are composed; 2, the oxidations by which tissue metabolism is affected; and 3, the excretory and eliminating processes by which the products of metabolism and other disturbing elements are attracted from the blood-currents and passed out of the system. The vital resistance of any living body may be said to depend directly on the activity and efficiency of these several physiologic functions and processes. be said to depend directly on the activity and efficiency of these several physiologic functions and processes. Conceding this to be true, the next inquiry is, what are the natural agents by which the efficiency of those functions and processes is maintained?

That the inherent or physiologic power of the cell organizations of both the blood and tissues to maintain their integrity and resist unnatural impressions depends largely on hereditary transmission will be admitted by all enlightened and experienced physicians. We may see this illustrated in every neighborhood and in all grades of society. In the same localities and in families pursuing the same occupations we see more than half of the children born in one family die before they reach the age of 5 years, while in the next family no child is lost in infancy and four out of five of them born persist in living to old age. Of one is it said he has but little vital resistance, is readily affected by all disturbing influences, and speedily succumbs to disease; while another seldom yields to morbid impressions and is said to be tenacious of life. Thus the inheritance of a vigorous and active condition of cell bioplasm constitutes one of the most important elements of man's vital resistance to toxic agents of every kind. It is this same perfection of the primary cell bioplasm, both of blood and tissues, that determines the activity and perfection of the processes of assimilation, nutrition and secretion, as well as of those of oxidation and disintegration or waste. Conceding the correctness of all this, the important question still recurs: What are the natural agents by which the properties of the cell bioplasm and all metabolic processes are maintained?

The agents essential for maintaining the functions of animal life are the presence of heat, oxygen as represented in atmospheric air, and blood or some fluid containing both food material and vitalized cells. To secure the uniform presence of these agents, man and all the higher orders of animals are supplied with digestive and assimilative organs to elaborate the necessary blood; pulmonary organs through which to obtain the necessary supply of oxygen; and a vascular or circulatory apparatus for distributing both to every part of the body, while the resulting metabolism evolves the needed heat, and effects the removal of the waste products through excretion and elimination. Inheriting, thus, a vigorous bioplasmic organization, a complete development of the digestive, respiratory and circulatory organs, supplied with only wholesome food, pure air, good water and appropriate exercises both of body and mind, the individual is endowed with his highest degree of vital resistance to the impression of toxic agents of all kinds. And if toxic agents do gain access to his blood or tissues, his phagocytic activity, active oxidation processes and efficient excretory functions furnish the most efficient natural means for either destroying the toxic agents or expelling them from his system. It is the co-operation of these natural means that are personified as "Nature" in the literature of medical practice; and the more clearly they are comprehended in all their bearings by the physician, the more accurately can he follow the Hippocratic injunction to "follow nature," and the more efficiently can he aid her in overcoming her embarrassments. To maintain the full normal oxygenation and decarbonization of the blood and the natural activity of metabolism, both nutritive and disintegrative, with free elimination of waste products, should be not only a leading, but a fundamental object of the practitioner in all his efforts, either to prevent or to cure disease. The hygenic conditions necessary for accomplishing this object have already been stated, and are too familiar to you to need repetition or restatement here.

The active investigations of the last half century, aided by all the facilities afforded by organic chemistry, microscopy, biology and physics, have pretty fairly demonstrated the important etiologic fact that nearly all

the acute general diseases or febrile affections are caused by toxic agents called ptomains, leucomains or toxalbumins, resulting either from pathogenic bacteria introduced from without, or from the retention of excrementitious products of metabolic changes within. The same investigations have developed the additional fact that these several toxic agents exert their primary disturbing or toxic influence on the organized bioplasm of the blood and tissues, directly interfering with the normal internal distribution of oxygen and with the tissue metabolisms, both nutritive and excretory, and thereby develop more or less disturbance of respiration, circulation, secretion, innervation and evolution of heat, constituting the familiar phenomena of fever. Closer analysis shows that the essential pathologic conditions are diminished oxygenation and decarbonization of the blood, and diminished or perverted tissue metabolism from the presence of some toxic agent exerting a degenerative influence on the corpuscular elements of the blood or displaying a special affinity for some particular structure or organ. Thus the toxin of the bacilli of diphtheria, in addition to its general disturbances, shows an active affinity for the membranes and glands of the air-passages; that of typhoid fever for the membranes and glandular structures connected with the digestive apparatus; and the pneumococcus toxin for the pulmonary structures. The more clearly the physician comprehends both the general bioplasmic and the special affinities of each toxic agent, the more accurately he can select and apply the appropriate remedies, provided always, that he has an equally clear knowledge of the modus operandi of the remedial agents he uses. All diseases arising from infectious or toxic agents have a period of incubation before active summons appear. If the physician could have charge of his patient during that period, by securing for him an abundance of pure air, good water, wholesome food and strict cleanliness, with an appropriate antitoxin or antidote, if any were known, he might so far improve his patient's processes of vital resistance as to prevent the development of disease, or, at least, render its progress mild and free from danger. The value of this mode was well illustrated by the voluntary inoculations for smallpox, extensively practiced several years before the discovery of the cow-pox vaccin by Edward Jenner, and the careful hygienic treatment of the patients during the period of incubation. Unfortunately, in the ordinary field of general practice, the physician seldom sees the patient until the period of incubation has passed and the active development of disease has taken place. It is then too late to establish complete prevention or immunity, but the application of the same means just indicated may limit the further evolvement of the specific toxin in the system, and aid the natural processes of vital resistance in destroying by leucocytic activity or expelling by oxidation and excretion that already existing, and thereby lessen both the severity and duration of the disease. And this is just what is sought to be accomplished by the use of antitoxin serums now in vogue. Much additional aid can be rendered to the natural processes by free bathing or sponging of the surface with water whenever the temperature rises above 103 F., and by the internal use of such remedies as are known to be capable of promoting the natural action of the skin, kidneys, liver and other depurative organs sufficiently to prevent the retention of waste products and the formation of leucomains. And if, during the progress of disease, the functions of the vasomotor, cardiac and respiratory nervous systems become depressed, they may be efficiently sustained by the judicious use of such nerve excitants or nerve tonics as strychnin, digitalis, strophanthus and other similar drugs. And in cases of extreme depression of the cardiac and respiration functions, further aid may be obtained by resort to direct inhalation of oxygen and injections of normal salt solution.

Guided by the facts and principles briefly stated in the preceding pages of this paper, the physician will find himself ever acting in harmony with Nature's own processes, and with the most satisfactory success. But this involves the necessity of studying, with all the facilities of modern research, the nature and effects of each toxic agent, as well as the nature and modus operandi of every therapeutic agent he uses. For only by studying the actual effects of toxic or disturbing agents on the blood and tissue and the natural processes of resistance, can he comprehend the true pathologic conditions involved, or the rational indications for treatment. And only by a similar knowledge of the action of each therapeutic agent can he know which to choose for fulfilling any given indication. Otherwise he must depend altogether on the dictum of authority, and give the routine list of remedies recommended for the treatment of diseases designated by the same names. In doing this he is soon found using, for the same patient on the same days, remedies widely diverse in their action, and often directly antagonistic. Thus, to relieve the pains, restlessness, and high temperature of the first stage of an attack of epidemic influenza or any other active fever, such a practitioner will often be found giving his patient liberal doses of antipyrin, phenacetin or some other coal-tar product which promptly affords the patient temporary relief from his pains, but at the same time impairs the properties of the corpuscular elements of the blood, lessens the activity of the leucocytes and oxidation processes, and thereby favors the retention of both the primary toxin and the products of metabolism, and protracts the period of convalescence. Or, if the case be one of continued fever, he will be found applying water in the form of baths or spongings, and giving more or less wine, whisky or brandy, alternately, with strychnin and digitalis from day to day, apparently wholly unconscious of the fact that the effects of his baths, spongings and doses of strychnin and digitalis are being directly antagonized by the alcohol of the wine, whisky or brandy. Both experiments and clinic experience have shown that the external applications of water in the form of baths or spongings not only diminish the fever heat but also increase, in a marked degree, the oxygenation and decarbonization of the blood and the elimination of waste and toxic products by the kidneys and other excretory organs, and at the same time the strychnin and digitalis directly increase the sensibility and reaction of the respiratory and vasomotor nerves, thereby sustaining the important functions of respiration and circulation. And yet, every well-devised experimental investigation has demonstrated that alcohol, chloroform and ether in the system directly diminish the sensibility and action of the respiratory and vasomotor nerves in proportion to the quantity used, and also markedly retard the oxygenation and decarbonization of the blood, and lessen both the activity of leucocytes and of normal metabolism, thereby placing their effects in direct antagonism to the effects of the other remedies given in conjunction with them. A large part of the prevailing scepticism regarding the curative effects of drugs has resulted from such coincident use of antagonistic agents, and the frequent use of agents for the relief of some prominent symptoms, while their ulterior effects were injurious to the natural processes

of vital resistance instead of aiding the same. And there is no part of the whole field of medical knowledge that more needs thorough research and revision than that which relates to the action of drugs on the living body.

OBLIQUE INGUINAL HERNIA.

TYPIC OPERATION FOR ITS RADICAL CURE.

BY ALEXANDER HUGH FERGUSON, M.D.

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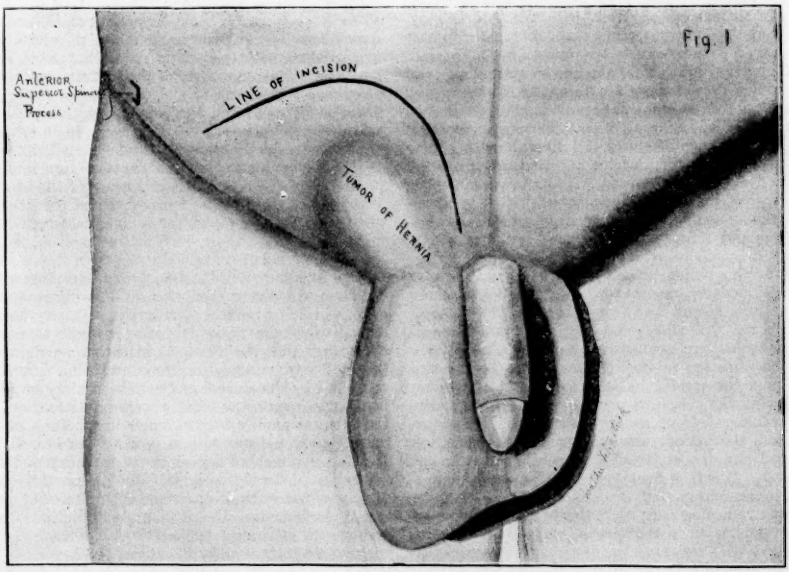
A typic operation for the radical cure of oblique inguinal hernia is one that places all the structures involved in the same relationship to one another as they are present in a normal person. The operations that have been hitherto produced to cure inguinal hernia fall far short of being typic. A careful analysis of failures; a painstaking research for hidden truths, and a discernment of contestable premises are ever before the surgeon who hopes for more success, new discoveries and lasting operative procedures.

In the multiplicity of the new environments that have arisen and changed from time to time, herniology shows that there has been considerable developmental experimentation, and attendant thereto new suggestions have presented themselves; new ideas were born, and new truths discovered. In response to a firm conviction of having found an improvement on the older operation, independent thinking surgeons invented the different procedures we now possess. It is plainly observable that "do this and he doeth it," without giving the reasons why, has, in this connection, been too frequently blindly followed by the profession. It is now nearly five years since I undertook to criticize the principal operations then in vogue, for I was not wholly satisfied with any of the methods. It was my desire to preserve the steps in each different operation that fulfilled one indication or more and to discard those steps that did not. The result was, I recommended a "combination operation," which was well received. Since then, however, I have been my own severest critic. I freely found fault with my own work, as well as that of others. Several relapses of the rupture occurred after my method, and recurrent cases operated on by other surgeons, after other methods, came to my clinics and practice. The first important observation I made was that the return hernial protrusion began at the upper and outer portion of the seat of operation above the cord, and usually near Poupart's ligament. This I recollected had been referred to by other surgeons. While operating on these relapses I found a slit in the aponeurosis of the external abdominal muscle through which the sac and usually some fat protruded. Determining on a search for the causes of these failures, it was thought advisable to make a semilunar incision and raise a flap of skin, fascia and aponeurosis of the external oblique muscle, in order to bring into view the whole sac, and deeper structures with their relations. To my astonishment, I found an angle between the lower border of the internal abdominal oblique muscle and inner aspect of Poupart's ligament wholly unprotected by the internal oblique and transversalis muscles. In the sixth case the unprotected angle extended upward and outward to the anterior superior spine of the ilium, there being no connection whatever between Poupart's ligament and these muscles, the space being occupied by some fat and a hernial sac. This is how I made the important discovery that a *deficient origin of the internal abdominal oblique* and of the transversalis muscles *at Poupart's ligament* is a direct cause of the rupture returning in this angle

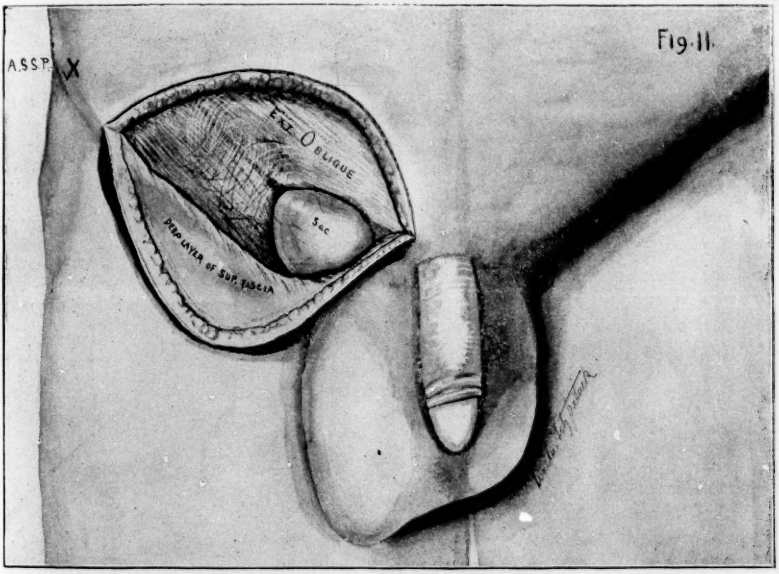


*Presented to the Section on Surgery and Anatomy, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

after operation for the radical cure. I then (January, 1898) began the semilunar incision in every hernial operation, and to look for the deficient origin of the internal oblique and transversalis muscles. (Dr. Nicholas Senn tells me that he "has been doing this same incision for about three years.") They were always deficient in origin. In order to clear up this question anatomically, I asked Dr. R. C. Turck, professor of anatomy in the Chicago Post-Graduate Medical School, to make fifty dissections for me of the inguinal region. This he faithfully carried out, assisted by Dr. Walter Fitzpatrick, who is an excellent artist. Dr. Turck presented his work to the Chicago Academy of Medicine as his inaugural thesis.

OPERATION.

First Step: *Semilunar Skin Incision.*—Begin the incision over Poupart's ligament, 1½ inches below the anterior superior spinous process of the ilium; extend



inward and downward in a semilunar manner, circumventing the internal abdominal ring, and terminate it over the conjoined tendon near the public bone. (Fig. 1.) Cut carefully backward with a very sharp knife and expose the vessels and pick them up with forceps before severing them, and thus prevent blood-staining of the tissues. Having passed through the skin, two layers of the superficial fascia, fat between them and superficial epigastric vessels down to the aponeurosis of the external oblique muscle, it will be noticed that it is not necessary to cut the superficial circumflex iliac, nor the superficial pudic vessels. Take a pledget of gauze and with it turn the flap of the skin, subjacent fat and fascia downward and outward over the thigh. This procedure brings into view the aponeurosis of the external oblique muscle, the external abdominal ring, with its pillars and intercolumnar fascia, the hernial sac, if it has descended through the external ring, external surface of Poupart's ligament, the under surface of the flap covered by the deep layer of superficial fascia, and the superficial vessels. (Fig. 2.)

Second Step.—Cut through the external abdominal ring and intercolumnar fascia; separate the longitudinal fibers of the aponeurosis of the external oblique muscle directly over the inguinal canal, far beyond the internal ring, over the surface of the internal abdominal oblique muscle, and up under the skin, to a point nearly opposite the anterior superior spine of the ilium. Delicate transverse fibers are encountered and severed. Retract the aponeurosis of the external oblique muscle and thereby bring into sight the deep structures, viz., the contents of the inguinal canal, the whole sac, with its adhesions, the spermatic cord, ilio-inguinal nerve, internal abdominal ring usually enlarged, frequently an accumulation of subserous fat, the cremasteric muscle, conjoined tendon, internal oblique muscle, and its deficient origin at Poupart's ligament, transversalis fascia, and the internal surface of Poupart's ligament. (Fig. 3.) I consider the congenital deficient origin of the internal oblique and tranversalis muscles one of the most frequent and important causes of oblique inguinal hernia. Inspect these structures carefully, and now determine whether the operation is to be typic or atypic. When the structures are well defined and not too much weakened by pressure atrophy, a typic operation can be proceeded with.

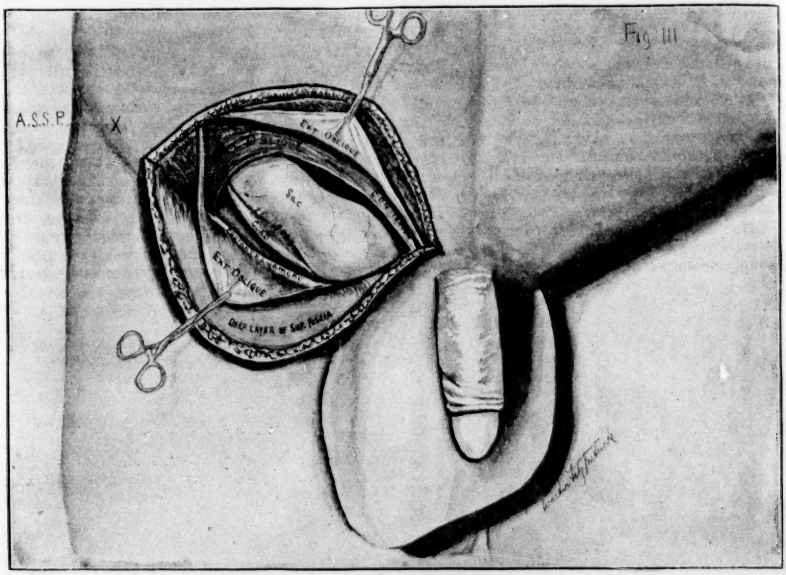
Third Step.—This step deals with the sac and its contents; the cord, cremasteric muscle, and subserous lipomata.

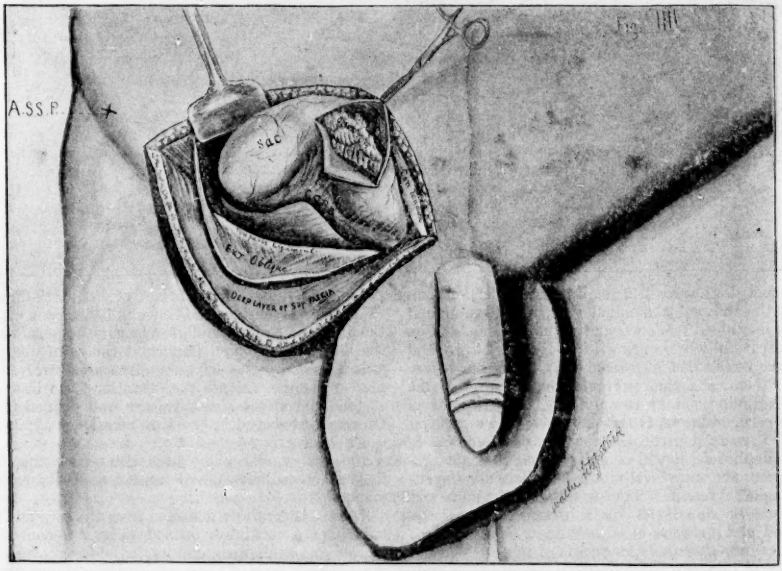
The sac is carefully dissected from the cord and internal ring; it is always opened (Fig. 4), contents inspected and dealt with, and ligated high up over the inserted finger (Fig. 6), cut off, and the stump dropped. In atypic operations the sac is usually preserved, as recommended by Macewen. If the sac be congenital, divide it in two, the distant half to form a tunic for the

testicle and the proximal to be treated as above mentioned.

When omentum is found within the sac it is liberally withdrawn, tied en masse, cut off, the stump covered with its own peritoneum and returned within the abdomen. (Fig. 5.) This decreases the intra-abdominal pressure and lessens the tendency to a return of the hernia. At this stage of the operation when the sac is opened, it is frequently found advantageous to place the patient in the Trendelenburg position to prevent protrusion of and injury to the intestines.

The cord is not disturbed. I have never been satisfied





with the raising and transplantation of the cord. In more cases than have been recorded the testicle has come to grief by this unnecessary procedure. Tearing the cord out of its bed is without an anatomic reason to recommend it, a physiologic act to suggest it, an etiologic factor in hernia, congenital or acquired, to indicate it, nor brilliant surgical results to justify its continuance. Leave the cord alone, for it is the sacred highway along which travel vital elements indispensable to the perpetuity of our race. The veins in the cord are not disturbed, unless a varicocele complicates the hernia. If the cremasteric fibers are unduly thickening the cord,

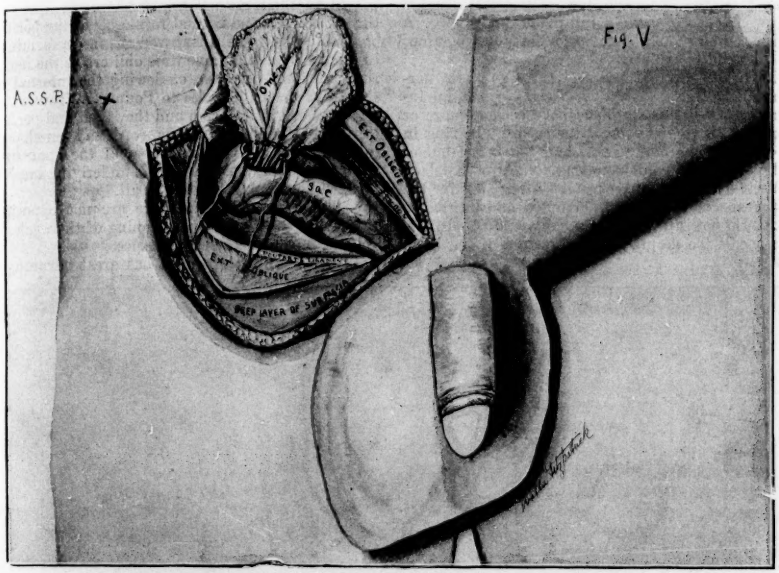


Fig. V

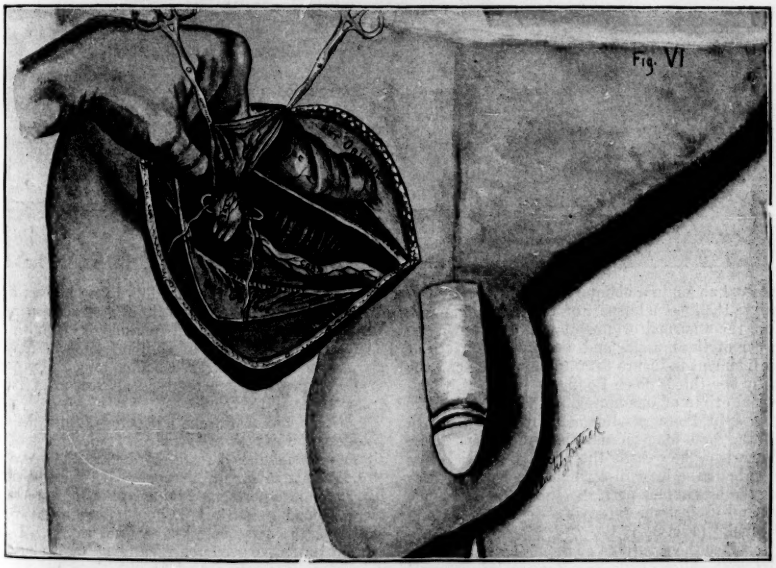


Fig. VI

they would better be removed along with adventitious tissue that is not unfrequently present.

An abnormal quantity of subserous adipose tissue is often deposited around the sac and cord and along Poupart's ligament, an etiologic factor in hernia, and if not removed tends to cause a return of the hernia. A systematic search should be made for fatty aggregations and they should be removed."

Fourth Step.—Restore the structures to their normal positions. The transversalis fascia forms the internal ring. In hernia its fibers have become more or less stretched above and around the cord. The ring in consequence is abnormally large and the fascia bulges outward. To rectify this condition take up the slack in the fascia and make an accurately-fitting ring for the cord by means of a suture, interrupted or continuous. (Fig. 7.) Do not injure the deep epigastric vessels, nor pass the needle too deeply in the direction of the large iliac vessels.

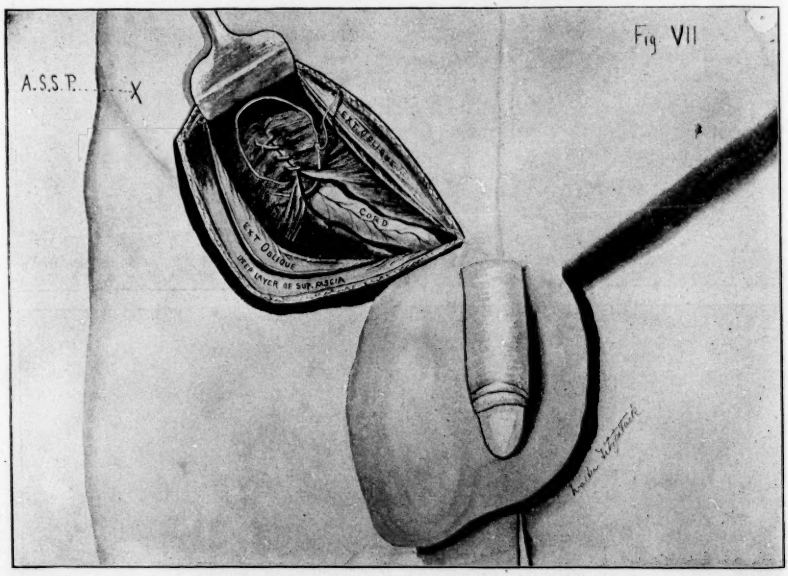
and coapt all its structures, like to like, especially the deep layer of the superficial fascia. (Fig. 10.)

COMMENDABLE FEATURES.

The different structures in the abdominal wall are placed in their normal relationship. a. The tying of the sac restores the normal rotundity of the peritoneum. b. The suturing of the transversalis fascia forming a new internal ring at the same time obliterates the hernial infundibuliform process. c. Sewing the internal oblique and transversalis muscles to Poupart's ligament secures a normal origin for them and they then find perfect protection to the internal ring cord and canal. d. The suturing of the separated fibers of the aponeurosis of the external oblique protects the underlying muscles and cord, while the skin flap covers all.

2. The four lines of suture are not opposite each other, thus securing an overlapping of the weak parts—lines of repair—by normal tissues.

3. The semilunar incision has great advantages: a.



The internal abdominal oblique and tranversalis muscles suture to the internal aspect of Poupart's ligament, and restore their normal origin. I usually freshen the lower border of the muscles and scarify the surface of Poupart's ligament to insure firm union, and extend the sewing fully two-thirds down Poupart's ligament, which is the normal origin of this muscle in the female. Take care not to split Poupart's ligament by grasping with the needle the same longitudinal fibers each time. (Fig. 8) It is surprising how easily these two structures come together without the least discernible tension, and it is gratifying to observe how perfectly these powerful muscles cover and protect the internal abdominal ring and inguinal canal. (Fig. 8½.)

Bring together the separated edges of the aponeurosis of the external oblique muscle. Restore the external abdominal ring. (Fig. 9.)

In bringing the skin flap into normal position, be sure

The hernial area is uncovered as in no other way, thus affording an accurate observation of structural relationship, etiologic factors and pathologic conditions. b. There is less tendency of skin infection, extending to the deeper structures. c. Should, unhappily, a return of the rupture occur, there is no scar over it and a truss can be better borne.

4. Of all the operations I have performed, this is the simplest and easiest to execute. There is a good scientific reason furnished for every step in the operation.

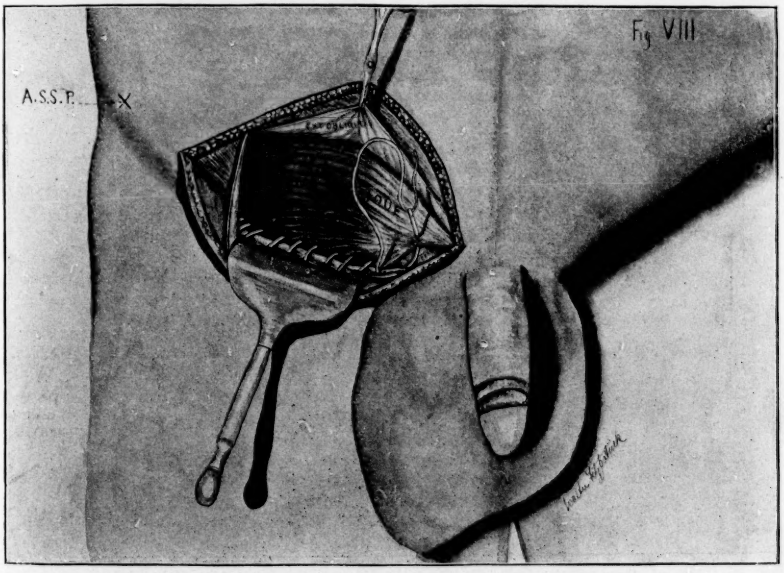
5. Results so far are excellent. In the last eighteen months I have performed the above operation sixty-four times, counting each case of double hernia as two operations. There have been no relapses as yet. I do not wish to say that recurrence can not take place. The ages of my patients varied from 5 to 76 years; station in life, from poorhouse cases to the most affluent. Seven hernias in 4 men were complicated with enlarged pro-

tate, where at the same time I performed gonangiotomy; 4 were strangulated; 1 (double) had chronic gonorrhea; 2 cases had non-descending testicle; 4 had varicocele; 2 had a femoral and umbilic hernia; 1 case had an epigastric and a femoral hernia as well, all three operated on at the same time; and 1 had oblique inguinal congenital, and an acquired direct hernia on the same side.

There was one death on the fourth day after the operation—an old man, 74 years old. He had enlarged prostate, chronic cystitis, diseased kidneys, etc. The effect of the anesthetic was most likely the cause of death. Three cases suppurated, 2 had chronic gonorrhea and the third had chronic cystitis. In 61 out of 64 cases primary union occurred. All the strangulated cases healed by first intention. Rubber gloves were used in 3 cases only—six operations. In doing the rest of these operations with bare hands, the fingers were allowed to touch the tissues as little as possible.

With a special flat, ruled probe accurate measurements were made on the operating table to ascertain: 1, the length of Poupart's ligament; 2, the length of origin of the internal oblique muscle from Poupart's ligament; 3, size of "Ferguson angle" and position of internal ring.

In the sixty-four operations the internal abdominal oblique and transversalis muscles were deficient in every case. To differentiate between the border of the internal oblique and the fibers of the cremasteric muscle a blunt dissector or protected finger is passed underneath the conjoined tendon and made to travel rapidly to Poupart's ligament, well under the border of the muscle, thus sending the cremasteric downward and hugging the main muscle to its origin, and then the measurements are taken. The origin—which is the main thing—of these two muscles was deficient in every case, the average length being 1⅜ inch. It was rare to find an



The wound was occasionally cleansed with salt, and the skin with bichlorid solution (1-2000). In about half the cases chromoform catgut (Nos. 0, 1, 2 and 3) was used in skin, as well as in deeper structures. The last six months I have discarded Nos. 2 and 3. If additional strength is deemed necessary the catgut is used double. Horsehair and silkworm gut were the other materials used for the skin. Different stitching methods have been employed, viz., interrupted and containing in the deeper structures, and for skin I used external interrupted, subcutaneous interrupted, external continuous and subcutaneous continuous. Half the stitches were removed on the sixth or seventh day, the rest within ten or twelve days. The patients were kept in bed from twenty-one to twenty-eight days, enjoined not to assume any work for six weeks after operation, and advised to wear a broad support—no truss—for three or four months.

origin of 2 inches; ½ or 1 inch was much more common.

CADAVER WORK.

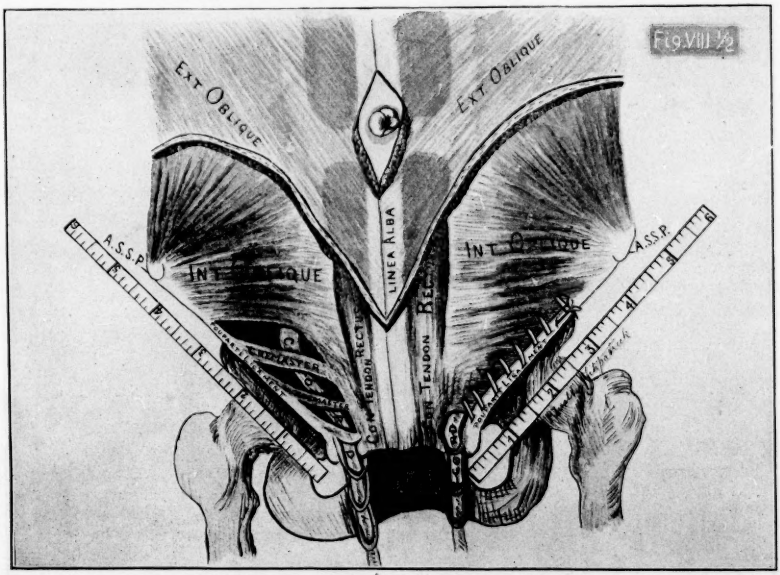
As already intimated, I requested Dr. Raymond Custer Turck to execute fifty inguinal dissections in this connection. In support of my "Typic Operation for Radical Cure of Inguinal Hernia" I shall here give a few quotations from his thesis, which clearly establish my claims:

In the course of numerous operations for the relief of oblique inguinal hernia, Dr. Alexander Hugh Ferguson, of this city, has observed: 1, that with but few exceptions there was a marked deficiency in the origin of the internal oblique and the transversalis muscles from Poupart's ligament; 2, that these muscles arising only from the outer portion of Poupart's ligament, with their lower fibers deficient in number and strength, afforded but poor protection, if any, to the internal abdominal ring; 3, that a strong barrier being thus removed, the descent of the hernia through the internal ring and downward along the inguinal canal was greatly facilitated.

Nearly every writer on hernia makes the statement that the

hernia in its descent pushes the arched fibers of the internal oblique and the transversalis muscles out of its way, displacing them outward and upward. Dr. Ferguson, while granting that the muscles are to a greater or less degree thus displaced, asserts that this displacement would not be possible, providing always that no congenital defect in the internal ring existed, were there not an abnormally short attachment of the muscles to Poupart's ligament; that the fact that the internal oblique, by reason of this deficiency in the origin of the muscle fibers and their consequent abnormal upward arching, fails to adequately cover and protect the internal ring and assist in the support of the abdominal viscera at that point is not altogether an effect of hernia, but rather a cause. He further asserts that in a fair percentage of cases of indirect hernia, a congenital—not an acquired—deficiency in the origin of the internal oblique had been present, and had formed in the individual a predisposition to the hernia, and that the hernia had been then occasioned by the gradual "giving way" of the peritoneum and of the transversalis fascia, or by a more immediate "exciting" cause.

Arguing on this hypothesis, Dr. Ferguson concludes that in an individual of well-developed internal oblique and transversalis muscles having a firm, normal attachment well down



along Poupart's ligament, these muscles, especially the internal oblique—by closely covering and protecting the internal ring—offer strong resistance to pressure from within, and thus render the liability to hernia very small.

The lower fibers of the internal oblique, leaving Poupart's ligament and passing inward to the conjoined tendon, normally form, with the ligament, an acute angle. This we have taken the liberty to call the "Ferguson Angle." The lowest point of the muscular origin in its relation—external or internal—to the internal ring, considered together with the degree of the Ferguson angle, goes far to show the relative strength or weakness of the resistance offered by the muscle at the internal ring, and hence should not be overlooked in the study of the causation of hernia.

Acting on Dr. Ferguson's suggestion, dissections were undertaken with a view of determining in the normal cadaver: 1, the average length of the attachment of the internal oblique muscle to Poupart's ligament; 2, the position of the external and internal abdominal rings; 3, the length of the inguinal canal; 4, to estimate the amount of protection afforded the internal ring, and, 5, to note other points of interest in this connection which might come under observation in the course of the work. There were in all fifty cadavers dissected, of which 27 were of adult males and 9 of adult females, whose ages it was impossible to obtain; 1 of male and 2 of female children, with given ages, and 11 fetuses of both sexes, with ages varying from seven months to full term. In regard to the latter, they were either still-born or had died shortly after birth, for in all cases the divided funis was present.

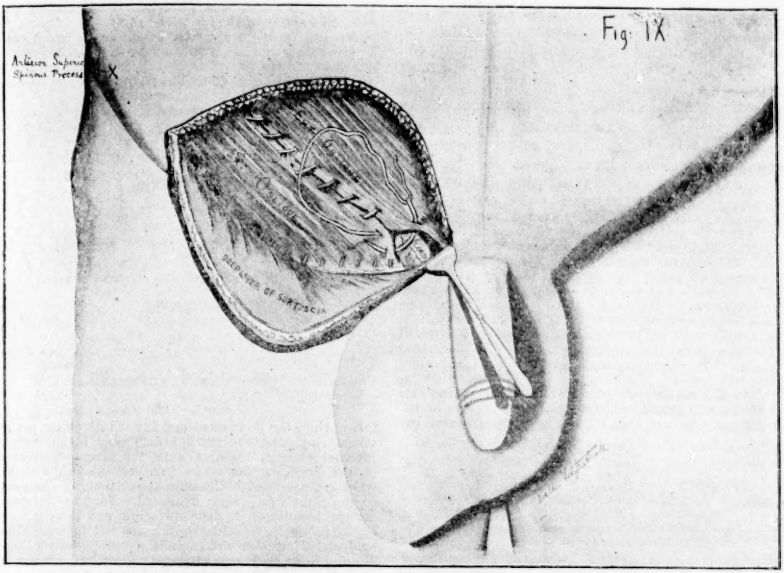
To insure against possible mistake, the lower border of the muscle passing from Poupart's ligament to the conjoined tendon was carefully exhibited, and the cremasteric fibers differentiated. The length of origin of the internal oblique given, then, is the distance between the anterior superior spine and the lowest point on Poupart's ligament, from which well-marked internal oblique fibers pass over to the conjoined tendon. The spermatic cord, or round ligament, was then followed upward along the inguinal canal to the internal ring, the fibers of the internal oblique being thus divided in the direction of the canal. The infundibuliform process of transversalis fascia was then removed, and the margins of the internal ring defined. A needle or probe was placed as exactly as possible in the center of the ring, and from the center the following measurements were taken: the distance to the anterior superior spine of the ilium; the distance to the spine of the pubes, and to Poupart's ligament. For the length of the canal the distance was taken between the center of the internal ring and the outer angle of the external aperture.

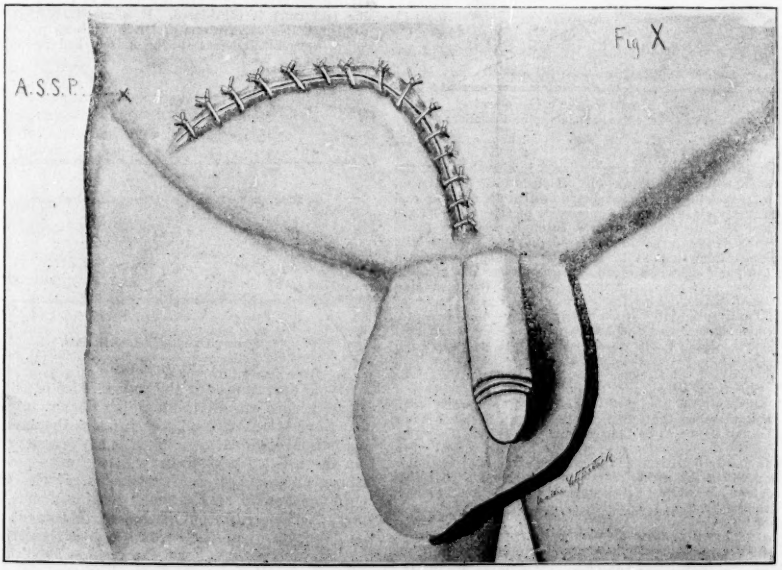
The average length of Poupart's ligament was found to be 11.2 cm. (4⅜ inches) in the male adult—25 subjects, Dissections 40 and 43 not being counted in the averages—and 12.5 cm. (4 15-16 inches) in the female adult—9 subjects. The average distance of the apex of the external ring from the public spine was 2.1 cm.—13-16 inch—in the male, and in the female 1.57 cm.—⅝ inch. These measurements present no points of particular interest or importance other than those given by obstetricians and anatomists regarding the greater width of the female pelvis, and the smaller size of the ring in woman than in man. In a majority of the male subjects, however, I found the length of the external ring to be less than an inch (2.5 cm.), the distance usually given, in several but half an inch (1.3 cm.), in one three-eighths of an inch (1 cm.). As shown by the tables, in these dissections, the size of the female ring averaged a little less than three-fourths that of the male.

The average length of the origin of the internal oblique muscle in the male was found to be 8 cm.—3⅛ inches. On comparing this with the average length of Poupart's ligament, it will be seen that the muscular attachment averages a little

more than two-thirds the length of the latter. Gray, Morris and others state that the internal oblique takes origin from the outer half; Quain, that it arises "from the outer half or two-thirds of the deep surface of Poupart's ligament." The

directly on Dr. Ferguson's asssertion that the internal ring derives its greatest protection from the internal oblique muscle. For it is well known that the lower (innermost) fibers of the muscle are the weaker, therefore the longer the ligamentous





results obtained here do not bear out the text-book statements, the internal oblique being attached in a majority of the normal cadavers to rather more than the outer two-thirds of ligament. This fact is important, bearing as it does

origin, the farther the weak fibers pass below and internal to the internal ring, the greater is the protection afforded the ring by the strong outer muscular fibers which pass over it.

Dr. Turek was fortunate in getting a full-term male fetus that had a left congenital hernia with retained testicle, while the right side was normal. Having carefully dissected the left side, he then says: "Diagrams 1 and 2, which are life-size, drawn from the general averages, show the relative position of the rings and the length of the internal oblique origin in the male and female. The difference between the sexes is even more strikingly shown in comparison of individual cases."

COMPARISON OF THE AVERAGES OF MEASUREMENTS IN MALE AND FEMALE.

The Doctor, having assisted me at several operations, and possessing a thorough knowledge of the technic of my operation, carried out an interesting and convincing experiment on this fetus, viz.:

Measurements were taken which showed the length of Poupart's ligament to be 3.5 cm., the distance of the center of the internal ring from Poupart's ligament 9 cm., the distance from the anterior superior spine 2 cm., and from the spine of the pubes 1.8 cm. The length of the origin of the internal oblique muscle was found to be but 1.3 cm., about one-third the length of the ligament. It will be seen from these measurements, taking into consideration the 90 degrees of the Ferguson angle, that the internal ring derived but little, if any, protection from the internal oblique. The fact that the 90 degrees of the Ferguson angle persisted when no hernial protrusion was present, and that the angle was further increased when the descent occurred, would seem to indicate that the abnormal upward arching—and weak origin—of the internal oblique was not altogether due to the hernia, but

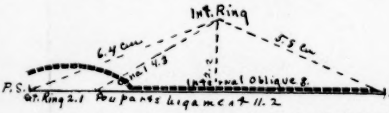


Diagram 1.—General average in male—twenty-five dissections.

Diagram 2.—General average in female—nine dissections.

that it was a congenital defect and, as such, a contributing cause to the escape of the gut.

Experimentally, the gut being replaced in the abdomen, the processus funiculovaginalis was cut off flush with the internal ring, the testicle being placed between the peritoneum and transversalis fascia well to the outer side of the ring, and the ring closed by interrupted sutures through peritoneum and transversalis fascia. The internal oblique and transversalis muscles were then sutured to Poupart's ligament well down toward the pubic spine, after Dr. Ferguson's method of operation. Strong pressure was then made on the abdomen, forcing the viscera downward into the pelvis and against the lower abdominal wall, especially at the internal ring—the same procedure which had caused the hernial descent before the normal relations of the parts were restored—but no protrusion through the internal ring was obtainable.

For comparison, dissections were conducted on the right side of the same fetus, and the measurements revealed a radical difference in the position of the parts when compared with those of the left side. Diagrams 6 and 7 show the position of the parts on the right and left sides. They represent exactly the measurements given in the tables, and when compared clearly demonstrate the greater amount of muscular protection which the right internal ring received. That this child, or man—providing development had gone forward normally—would have had a right oblique inguinal hernia is altogether improbable.

SHOWING RELATIVE LENGTH OF ORIGIN OF INTERNAL OBLIQUE, AND POSITIONS OF INTERNAL RINGS IN DISSECTIONS 29 AND 30.

After dividing the internal oblique fibers upward to the internal ring, the ring was enlarged to the size of the internal ring on the left side before the latter had been restored, and downward pressure again applied on the abdomen. The intestine descended easily through the ring. The gut being returned, the cut edges of the internal oblique were united by interrupted suture, without, however, in any way reducing the size of the internal ring, and pressure once more applied to the abdomen. No amount of force, however, produced a protrusion of the abdominal contents, demonstrating clearly the valve-like action of the internal oblique.

Finally, let me draw your attention to two dissections on a male adult, who had a left oblique inguinal hernia.

SHOWING LENGTH OF ORIGIN OF INTERNAL OBLIQUE AND POSITION OF INTERNAL RINGS IN DISSECTIONS 43 AND 44—MALE ADULT.

Dissections 43 and 44, respectively, of the left and right side of the cadaver of a male adult, are represented in diagrams 8 and 9. In this subject there was present on the left side an oblique inguinal hernia. The exceptionally enlarged ex-

Diagram 6.—Left side—Congenital hernia.

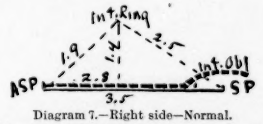


Diagram 7.—Right side—Normal.

ternal ring, the downward and inward displacement of the internal ring, and the marked deficiency in the origin of the internal oblique, together with the largely increased degree of the Ferguson angle—in this case about 90 degrees—are, when compared with the normal relations of the parts shown on the right side, clearly exhibited. That the internal oblique muscle, because of its deficient origin and the pathologic arching of its fibers, failed to protect the left internal ring, is self-evident. That this defect in the muscle was altogether induced, or, we may say, artificially produced, by the hernia, is improbable, especially when the length of origin on the right side (8.1 cm.) is considered. It seems likely that this subject illustrates exactly one of Dr. Ferguson's points, namely, that a congenital defect in the muscle had predisposed the subject to the hernia.

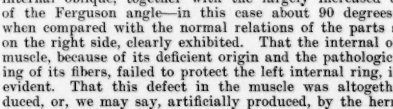


Diagram 8.—Left side—Oblique inguinal hernia.

Diagram 9.—Right side—Normal.

ATYPIC OPERATIONS.

Atypic operations for the radical cure of oblique inguinal hernia are all those which do not in the completed operation leave all structures as they are present in a normal inguinal region. It is not necessary to mention these, but I wish to draw attention to plastic procedures on the sheaths of the rectus muscle, when the conjoined tendon is abnormally thinned out (Bloodgood); to the utilization of the sac (Macewen); and to the employment of the sartorius muscle to strengthen the inguinal region (Ferguson).

Some cases may present themselves—but they must be comparatively rare—where it may be advisable to do plastic work in addition to the typic operation.

10 Drexel Square.

PROSTATIC HYPERTROPHY.

RAMON GUITERAS, M.D.
Professor of Genito-urinary Surgery, New York Post-Graduate Medical School; Lecturer in the Medical Department of New York University.
NEW YORK.

SOME OBSERVATIONS ON THE BOTTINI OPERATION.

One of the curses of old age is hypertrophy of the prostrate. Why it occurs in some unfortunates and not in others is a question that is difficult to answer, and if it could be answered it would then be possible to learn the cause, a question which now is such a puzzling one to the most learned and observing surgeons. It would seem natural to suppose that those who had in early youth suffered from venereal troubles, or had indulged too freely in the dissipation of life, would be the ones picked out for punishment in old age, but such does not seem to be the case, and in my personal experience it seems rather an unjust reward for the steady, the forbearing and the righteous.

To describe just what this condition is would be to unfold a mystery which the most distinguished pathologists have apparently not yet fathomed. For although many, in describing its pathology, make it easy to understand, others seem to be at variance with their opinion, e. g., some pathologists say that it is always a fibromyomatous growth and never a glandular one, while others say that it is often glandular.

The cause and pathology are, then, the two great points to be considered, and it would seem that, where there are so many eminent pathologists connected with the homes for aged men, autopsies ought to disclose the latter condition and there should be unanimity of opinion, as pathology is an exact branch. It seems to me, therefore, that the inference must be drawn that the subject has been sufficiently studied and that the pathologists neglect to examine, in a routine way, this little gland tucked down between the rectum and the pubes, in the same way that they overlooked the vermiform appendix before it began to play such an important role in the surgery of the day.

To speak superficially of the pathology as it is considered today, it would seem that enlargements of the prostrate are variously classified according to their microscopic anatomy or the clinic symptoms to which they give rise. As the symptoms are chiefly due to the physical qualities of the tumor and are thus mechanic in their origin, it is manifestly more important to classify prostatic hypertrophies by their macroscopic appearance rather than by their microscopic. But at the same time it is worth mentioning that there are supposed to be three chief varieties histologically: 1, myomatous, or fibromyomatous, in which the stroma of the gland is principally involved; 2, adenomatous, in which the glandular elements predominate; and, 3, mixed forms, in which both stroma and glandular tissues are involved.

Such specialization, according to Socin, has but little surgical interest, because in clinic diagnosis it cannot be applied to good account and thus has no influence on prognosis or treatment.

Viewed clinically, prostate hypertrophies occur in three chief forms.

1. Uniform enlargement in all directions, with the general form of the gland preserved. As the symphisis pubis and the urogenital diaphragm prevent the gland from growing downward to any great degree, the tendency of the tumor is upward and backward into the cavity of the bladder. Thus about the orifice of the urethra is formed a ring of thickened gland tissue under the mucous membrane of the bladder. These forms of hypertrophy do not reach so great a development as others and are more mild clinically.

2. Irregular enlargement. By far the greatest number of cases belong to this variety. All parts of the gland may be enlarged, but certain portions are much larger than others, and thus many kinds of tumors are formed. The part chiefly involved is that portion of the gland just behind the beginning of the urethra. In the first form mentioned this part fades into the lateral lobes of the enlarged gland without sharp demarcation, but here it forms a tongue which overhangs the internal orifice and is termed by Mercier the "valvule prostatique." This increases to a large independent tumor which is separated from the rest of the gland by deep grooves, and thus gives rise to the well-known "middle lobe" of the prostate.

If both lateral lobes be enlarged at the same time, we have a threefold gland clearly marked, with an egg-shaped tumor on each side and a triangular pyramid behind; an arrangement which gives to the urethral orifice a "Y" shape, with the stem forward and the legs backward. The surfaces of the tumors may be smooth, or, more frequently, they are irregularly prominent, as if made up of a number of smaller tumors which project into the bladder. These nodules may separate and remain as free bodies under the mucous membrane of the bladder. The anterior commissure of the gland is seldom the seat of the hypertrophy, because there are but few if any glandular elements presented here.

3. The third form occurs when all the gland is normal except in one small area, and is termed the localized variety. It is a very rare form.

As the prostate hypertrophies, the orifice of the urethra becomes elevated, and the return flow of blood from the vesical veins is impeded by pressure on the prostatic plexus. This results in imperfect evacuation of the bladder, and consequetly in residual urine. Cystitis develops, as is evidenced by a frequent desire to urinate—due to irritation of the neck of the bladder from venous congestion—and the other symptoms usually present. If the hypertrophy continues, these symptoms increase or are replaced by graver ones, and we have dilatation of the bladder, hypertrophy of the muscular and fibrous coats, and the formation of diverticula; dilation of the ureters and pelvis of the kidney, congestion and catarrhal inflammation of the entire urinary tract, with an accumulation of the urinary and inflammatory products, and perhaps septic inflammation extending from the bladder to the kidney—pyelonephritis—resulting in chronic uremia and death.

Thus we see what conditions must be relieved in order to benefit our patient. His general health should be improved; his bowels regulated, and his skin kept active by warm baths; his clothing should be warm, to prevent taking cold, and he should eat moderately and drink plenty of water. His urine should be kept in the best possible condition by the use of internal urinary antiseptics, as the benzoates, the salicylates, boric acid, etc. Oleum gaultheriae, eucalyptus, and urotropin are also of great service. Locally, his bladder should be emptied by the catheter twice a day and washed out with a boric acid solution; other antiseptic solutions, as permanganate of potassium, nitrate of silver, and borolyptol, being used at intervals. When the patient has been brought into the best possible condition gen-

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erally and locally, an operative procedure can be considered, but an operation should never be performed until palliative means have failed.

Ligation of the internal iliacs, resection of the vas deferens, castration, prostatectomy, and the formation of a suprapubic fistula have all had their day and advocates, and the mass of practitioners seem now to be coming to the opinion that the operation by the Bottini galvanocaustic incisor is in most cases the quickest, the simplest and the best.

This instrument was devised by Bottini of Pavia. When he performed his first operations—1875—he made use of the so-called "cauterizatore prostatico," representing an instrument of the shape of a catheter of medium caliber, with a short beak, the latter carrying on a porcelain disc a platinum plate about three-fourths of an inch long. With this plate, made red-hot by the electric current, he cauterized the prostate thoroughly at different spots, if necessary repeatedly. When the eschar had been pushed off, improvement often began to set in; at times it took thirty days before the patients could notice the effect of the interference.

Two years later he was able to publish five successful cases treated in this way. With increasing experience, he discarded the cauterizator and made use only of the second instrument, the "incisore prostatico," which removes the mechanic obstruction to the outflow of the urine at the neck of the bladder by slowly burning a groove or grooves through the same, and not by superficial destruction. This instrument has a male and female shaft, not unlike a lithotrite. The beak of the female part forms almost a right angle with its shank, and has along its concave surface a deep groove along which the male shaft glides. The shank of the male arm shows a platinum knife at its distal end, about five-eighths of an inch long, which is drawn along the groove of the female arm, toward the handle, on turning an Archimedean screw at the outer end of the instrument. A scale (Sc.) attached to the latter admits of exactly gauging the length of the groove to be cut. The instrument further shows the so-called cooling apparatus, which was added to it in 1882. Freudenburg has made a modification of this instrument, which is the one usually used in Germany and this country. It differs principally in having a larger and better-cooled handle, and the water-pipes at a more acute angle to it. It is also a heavier instrument.

This operation has been performed about two hundred times, but I have only found about one hundred well-reported cases, exclusive of my own.

Bottini has performed this operation 80 times, but we have found only 23 cases sufficiently well reported to be of value for compounding statistics. Some of these are so lacking in important parts of their histories and the details of the operation and after-treatment that they convey little to the mind of the reader, excepting that "miracles" have been performed in a certain part of Italy by one Bottini.

In reading over Bottini's 23 wonderful reports here commented on we notice: 1, that no deaths have been reported; 2, that twenty of these patients, who had been suffering for from eight months to six years from prostatic trouble, were cured in from eleven days to three months, and all but one of them, i. e., 19, in less than one month; 3, that these cures have been accomplished by a single cut, 2 cm. or more in length, either in the posterior or one lateral lobe, or often in two lobes, sometimes, though rarely, in three; 4, that the time for the operation varied from forty-five to ninety-five seconds. The three remaining cases were very much improved.

Any investigator devising an instrument like the Bottini incisor should naturally be proud of his achievement, but it is difficult for a reader in a distant land, accustomed to observing enlarged prostates and the sequelæ of their observation, to arouse his enthusiasm to such a point as to be able to agree with the discoverer of the galvanocaustic incisor.

A reader of these reports can easily see how the heated iridioplatinum blade can glide through the prostatic bar burning a furrow through it, and reducing the height of the dam, and he can also understand how by severing and searing the vessels, the blood-supply can be sufficiently shut off to cause additional atrophy. He cannot understand, however, how a chronic cystitis which has existed for months and years can in a few days be perfectly cured, or how tone can be restored to the wall of an atonic bladder in that time.

Bottini, in some of his reports, spoke of the cases having had gonorrhea, as if he considered it a possible causative factor of the hypertrophy. I do not think that such is the case, and, in reviewing in his mind the patients whom he has treated for this trouble, he can not remember a single one where he could establish a direct relation between the two. As the patients in whom reference to such a relation was made were about forty years of age, or under, it is possible that the symptoms mentioned may have been due to some other prostatic or seminal vesicle trouble rather than to senile hypertrophy.

In speaking of his operations, Bottini says very little about the anesthetic used. He occasionally speaks of having given chloroform or cocain, but often makes no allusion to it.

The frequency with which he has resorted to permanent catheterization in after-treatment, sometimes for fifteen days at a time, is a noticeable feature of these reports, and leads one to think that perhaps the bladder regains more tone than is generally supposed by being allowed to contract gradually.

It is gratifying to remark that no cases of syncope, or bladder or renal congestion followed by uremia developed in these cases, as so frequently occurs in this country.

Another thing that strikes one as most remarkable in reading over Bottini's reports is that in only one case a marked rise of temperature, that is to 104, was mentioned. This was said to be due to malaria. The writer is, however, of the opinion that most such rises of temperature occurring after this operation in cases associated with a bad cystitis are due to septic absorption.

It was interesting to read the report of one of his cases in which a calculus was present in connection with middle lobe hypertrophy. The stone was first crushed, and then an incision made posteriorly with the incisor. it occurs to the writer that it might have been better to first perform the Bottini operation, and later the litholapaxy, as this would allow the operator to insert a larger evacuator, which is so important in litholapaxy.

Meyer has reported twelve cases, the most interesting and instructive that have been described, on account of the candor displayed in their narration, and the skillful way in which he met every obstacle.

In most of the cases he performed but one operation, although in 2 of them he was obliged to operate twice. The results were: 2 cured, 6 improved and four deaths. In most of the cases he made three incisions, and in some

four, all of good length. In 4 he reports a marked elevation of temperature after the operation. In the first a chill was followed by temperature of 103.8, with delirium; in the second, 103.6, orchitis and abscess of testes; in a third, 104; in a fourth, 103. Two of these cases died. One of the cases was interesting on account of the number of operations performed to no avail. They were: 1, vasectomy, no benefit; 2, perineal prostatectomy, no benefit; 3, suprapubic cystotomy for inspection; 4, double castration; 5, Bottini, under ether. The patient finally died. In two of his cases Meyer found it necessary to perform a suprapubic cystotomy. Most of his operations were under local anesthesia, although two were put under a general anesthetic, in one case ether, in another Schleich's.

Freudenburg has performed this operation about thirty times, but only six of his cases are here commented upon. He has done more than any other surgeon, excepting Bottini, to perfect this operation, as he has modified the instrument in a way to make it more generally acceptable to the operating surgeon. He is a careful and conscientious man and a good observer. His results, however, while they correspond with those of the other German and American surgeons, cannot compare with Bottini's, operated on by means of his original crude instrument. This would lead us to think that if Bottini's reports can be accredited, the Freudenburg modification is a failure, but such does not seem to be the opinion of other surgeons, almost all of whom have endorsed the Freudenburg instrument as the best. His reports are intelligible, and he does not claim such perfect cures as does Bottini. He has a tendency, however, to paint the pictures of his cases before operation in a bad light, as if in an apologetic way, to explain the results that may follow. He speaks of many of them as emaciated, run down and in bad condition, with bladder and kidney complications. He usually makes three incisions of fair length, operates under eucain,and precedes each operation by a cystoscopic examination. Most of his cases have improved. He had two deaths.

Lohnstein has operated 12 times, but only 6 of his cases have been sufficiently well reported to be of use. He usually makes two incisions, one posteriorly and the other through one of the lateral lobes, although he has made them through both lateral lobes, omitting the posterior and anterior incision. He operated twice in 2 of his cases. Of the 6 here reviewed, 5 were improved and one died. One patient collapsed before the operation could be completed. He reports another case that collapsed on being catheterized, illustrating the mistake of too rapidly emptying the bladder. The other 6 cases were only referred to, and not reported in detail, as the results were not permanent.

Simon has reported 8 cases. His reports are very interesting to read, as his methods seem different from other operators. He usually makes one incision, a posterior one, although in some he incises a lateral lobe in addition, and in others he makes three incisions. He does not seem to look at the operation so very seriously, as he performs it on patients in bad condition, suffering from cystitis, nephritis, and arteriosclerosis, having a large amount of residual urine at the time of the operation, and he allows them to return home on the following day—with at times as much as fifteen ounces of residual urine in their bladder—and then treats them in the dispensary. Some of his cases before operation had from twenty to fifty ounces of residual urine, which was very much improved by a posterior incision. He cystoscoped one of these cases two days after an operation, and saw a dark groove in the site of the incision; 3 cases were reported as cured, 2 as improved and 3 died.

Crespi reported 6 of Bottini's cases. There is nothing additional to be learned from this group. They were not difficult ones, and all seem to have been benefited; 1 case was operated on twice. The most interesting of his cases is a patient who was first operated on by Bottini's method, followed by two years of relief, He then had vasectomy performed, which reduced the hypertrophy one-half, and was followed by the disappearance of blood and pus from the urine. He was then again operated on by the Bottini method, and improved. Crespi reports 4 more cases, varying in age from 64 to 78 years, 1 of which was cured in a day, another in 3 weeks and 2 others improved.

Morton has reported five cases, all improved by the operation. In each there was still some residual urine present at the last report, and the patients still had frequency of urination at night. Morton made moderate-sized incisions, and operated most consistently.

Hane reported 5 cases, ranging in age from 58 to 68 and his results were fair. In 1 case he operated twice, and in the other once.

After careful operations, frequency still existed, especially at night, though not in so marked a degree. It is interesting to notice that in the cases operated on twice the bladder still contained twelve ounces of residual urine, and he had to use the catheter.

The report of Bruce-Clarke's 4 cases as given us by Jermoli are incomplete and unsatisfactory. The operations were evidently performed under general anesthesia, and the results were all cures in a short time, notwithstanding the fact that the patients had considerable residual urine, and had suffered from prostatism for a long period.

Cecchecorelli reported 4 cases, varying in age from 41 to 60 years: all bad cases of long standing, associated with catheter life; 3 of them were cured in from nine to seventeen days, and the 1 improved for a while and then died.

Lewis reported 2 cases. These were well described. Both were operated on twice, and improved. He used air to inflate the bladder. In speaking of one case after operation, he said that the patient could empty his bladder all but two or three drams, which amount is often found in a healthy viscus. This statement I take exception to, as an unobstructed, healthy bladder should be able to empty itself.

Freeman has reported 2 cases with excellent results. He speaks of 1 patient having considerable bladder irritability after the operation. I am glad to hear this mentioned, as personally I have found it to be the most persistent and obstinate post-operation symptom that we have to contend with.

Lennander has operated in 3 cases from 65 to 77 years of age. They were all of long standing, with symptoms of obstructive cystitis; 1 was relieved, 1 discharged with a permanent fistula, and 1 died three months after the operation. In the first case after one incision of 3 cm. in length, the patient did not urinate for twenty-two hours. The last 2 cases were of especial interest, the first because he was made worse rather than better by the Bottini, and was then improved by a vasectomy. The second has many points of interest: 1, both testes were very much involved by disease ascribed to catheterization; 2, their removal had no influence on the size of the prostate; 3, calculi were found in the bladder, complicating the case; 4, a suprapubic

cystotomy was performed; 5, an incision 1.75 cm. in length was made by the incisor after this, thus enabling the operator to see the action of the cautery knife through the suprapubic opening; 6, a second incision, 3 cm. long, was made by the incisor three weeks later, followed by retention, and, finally; 7, a permanent fistula had to be resorted to.

The reader can only condemn the presence of the assistant's finger in the rectum during the operation, as mentioned in one of the cases, as in order to detect the presence of the instrument he has to press up the anterior wall of the rectum in the region of the prostate, which might cause the heated blade to burn through, making a ureterorectal fistula. In criticising the poor results in these cases it would seem that the incisions were too short, and too few.

Downes, Weber, Chassaigne, Kreisel and Rydygier have also reported cases, most of which were improved. Rydygier's case died four days after the operation, of urinary extravasation, and septic peritonitis, due to catching the back of his instrument in a pocket in the bladder instead of behind the prostate, and thus burning through the serous surface of the bladder. This is an accident that is difficult to foresee, and can only be avoided by making a cystoscopic examination of the bladder some time before the operation.

Rochet has reported two cases. One died and the other was discharged seemingly improved.

The writer has performed this operation 20 times, with 2 deaths. The first 12 were all benefited and reported in the *Medical Record*—of the 8 others, 2 died, a total mortality of 10 per cent; 1 died of chronic Bright's disease and would not have been operated on had not the hospital interne reported the urine negative; death a few weeks after showed the cause to be chronic interstitial nephritis, which had been present at the time of the operation, but not to the knowledge of the operator. The other case died of sepsis. It was due to an accident, and illustrated two important features. The writer had given this operation to the house surgeon and had placed himself behind the operator with the battery. The posterior incision was being made when the writer left his post to look at the battery, which was not working well. After rectifying this, he told the operator to proceed; but during this time the patient had pulled backward, allowing the concavity of the beak to slip over the convexity of the prostate, and the cut was accordingly made through the membranous urethra into the perineum. The result of this was retention of urine, necessitating a perineal section, which was followed by sepsis and death. The two important principles illustrated by this are: 1, that the battery should always be placed on the patient's left, where it can be seen by the operator and easily grasped by him, if necessary, with his right hand; 2, that if the patient pulls away from the operator, as he is liable to do under local anesthesia, the operator must not allow his arm to remain stationary, but must follow up the patient so that the instrument will always remain in the same relative position until the incision is completed.

Of the remaining 18 cases, 15 have improved, and in two of them no residual urine is now present, while in the other 13 only about one-eighth to one-quarter of the amount present previous to the operation now exists; 3 others have been too recently operated on for comment at present. What these patients seem to complain of principally after the operation is irritability of the bladder.

GENERAL CONCLUSIONS.

Castration, vasectomy and iliac ligation are of very little benefit in prostatic hypertrophy.

The choice of operative procedure is between prostatectomy and the Bottini.

In commenting on these two, the writer thinks that the former is by far the most difficult and dangerous; in fact, he believes that in the hands of a good genito-urinary surgeon in equally picked cases, the mortality in prostatectomy would be found to be twice that of the Bottini, and that in the hands of the general practitioner it would be three times as great.

There are certain cases suitable for enucleation and others only for the Bottini.

Those for enucleation are the large, so-called glandular hypertrophies, where the prostate feels like a good-sized tumor by the rectum, and the urethra is felt to be much elongated and distorted by the hypertrophy. Here the operator can find something to enucleate and the pieces come away easily. The writer has performed the Bottini operation in a few of such cases on account of the refusal of the patient to undergo an enucleation and the benefit resulting from it has been surprising to him.

The cases calling for the Bottini are more those where the hypertrophy is not marked, but where rectal examination shows a marked induration, and urethral examination shows middle lobe impediment. In many of these cases an enucleation would be impossible, while in no case of the large tumor variety would a Bottini operation fail to be of benefit.

In comparing the mortality of prostatectomy with the Bottini in the future, statistics may show it in the latter to be as great as in the former, the same as is noticed in comparing prostatectomy with castration.

One of the reasons for this will probably be because both castration and the Bottini are considered easy operations, and ones that can be performed in almost any case, whereas the prostatectomy would be reserved for especially chosen and suitable cases.

Bottini is in a measure responsible for looking so lightly at the danger of this operation, as his reports resemble those of cases touched by a fairy's wand. Willy Meyer, in one of his articles, said: "It is almost incredible that this, as it seems, splendid operation should have been practiced for twenty-two years by virtually only one gentleman—namely, the inventor of the method, Enrico Bottini of Pavia—and that, in spite of the fact, he has repeatedly drawn the attention of the profession to his work."

It seems to the writer that the surgeons reading Bottini's report would consider them too good to be true, and for this reason have not paid sufficient attention to them. There appears to be among the other Italian observers engaged in this work a tendency "to follow the leader," and to paint the reports of their cases in the same rosy hue. The German and the American observers, however, go into this subject in a more thorough and scientific way. They describe their operations more clearly and do not hesitate to mention their failures and deaths. The standard of what a cure is after an operation seems to vary; some place all under this class who do not die, while others consider the same as simply improved.

It would seem from reading over these reports that the Italians must have a better tolerance for the operations than the Germans and Americans. Such is not the case, however. The writer has a surgical service in the largest Italian hospital in this country, and 25

per cent. of the cases operated on have been Italians, notwithstanding which he has observed less improvement in them than in others.

The class of cases demanding this operation comprises those in whom there is nearly a complete retention of urine and the patient has to depend almost entirely on the catheter, also those with the tenesmus and irritability of the bladder so great that catheterization and washing out of the bladder are not able to relieve it; again, when the cystitis is very marked or troublesome, and when hematuria is a frequent symptom. An increasing amount of residual urine is another urgent cause, or when catheterization is followed by hemorrhages or bad attacks of cystitis. The cases in which it is contraindicated are where the kidneys are badly diseased, medically or surgically, or where arteriosclerosis is marked and where the heart action is weakened through valvular or fatty changes.

The question of anesthesia is an important one. The writer does not think that either cocain or eucain relaxes spasm sufficiently, and, besides this, he is sure that most patients suffer considerably when operated on under their influence. Cocain is also said to be dangerous, and eucain in one case was found to have produced syncope. Of the general anesthetics, ether is bad for old men whose kidneys are at fault, and chloroform is bad for the heart. This has led the writer to give nitrous oxid gas in a number of his cases. The patient is put under quickly and comes out almost immediately. The danger in the hands of a man who understands its administration is *nil*.

In Colton's Dental Bureau, in Cooper Union, N. Y., it has been given over two thousand times without an accident. The patients have at times been kept under its influence for over two hours. It can be given on a full stomach.

In the ordinary operation three cuts are usually made. The first one is always posterior, the two others are on either side in cases of lateral lobe hypertrophy. In cases where the enlargement is irregular and situated principally in the middle lobe, the second incision should be anterior and the third through the larger of the lateral lobes. The posterior incision is usually 3 cm., the anterior 2 cm. long and the lateral 2.5 cm. The time for each cut is usually eighty or ninety seconds, and the strength of the current from forty-five to fifty amperes.

Immediately after the operation the patient may be allowed to pass water, if he desires, and he should be put to bed. Patients are generally able to walk from the table to their beds, although it is safer to carry them.

The internal treatment consists in urinary antiseptics, diluents, and antispasmodics, if necessary. As a diluent, water taken in large quantities is usually sufficient. If it is found, however, that the patient will not drink much, and that the amount of urine passed is below normal, its flow should be further stimulated by a mild duretic, and for this purpose I am in the habit of giving a mixture of acetate of potassium, sweet spirits of nitre, three times a day in a glass of water. As a urinary antiseptic, I generally give salol in ten-grain doses three times a day, or urotropin in the same strength, the latter preferably when the urine is foul and ammoniacal. Benzoate of sodium and benzoic acid in fifteen-grain doses are also of service.

The antispasmodics are codein, morphin and belladona. Those are given for frequency, pain, tenesmus or burning. They may be prescribed singly or combined, and afford the patient a great deal of relief. Codein may be given alone or in combination with belladonna, and perhaps benzoate of sodium. Morphin is rarely used, and then only for pain. It is very efficacious in combination with the extract of belladonna, a quarter of a grain of each, in suppositories at night, in cases where there is considerable frequency, pain, burning, and tenesmus. The diet should be liquid for the first few days, then semisolid—soft—and full diet at the end of the week, if the patient has no rise of temperature and is feeling well.

If retention of urine occurs, as it frequently does, a cathether should be passed into the bladder and allowed to remain for twenty-four to forty-eight hours. On withdrawing the catheter, if the patient is still unable to pass much urine, he should be catheterized regularly until the sloughs have been passed, when, if he is still unable to urinate, a second operation should be performed. If the patient has complete retention and nothing can be passed into his bladder, he should either be aspirated suprapubically, or a perineal section performed.

If there is much hemorrhage, it can usually be stopped by a hot irrigation, and if not, a perineal section should be performed, after which a thick-walled perineal tube can be inserted into the bladder, around which gauze can be packed, thus making pressure between the sides of the tube and the cut posterior urethra.

The bowels should be moved by salines on the second day, after which they should be kept open for some days.

An elevation of temperature usually takes place on the night after the operation or on the following day, rising from 100 to 105 F. This rise generally goes down to normal after the bowels have been moved, but I have seen cases with a temperature of from 99 to 102 for some weeks after the operation. In such a case the fever usually disappears after the sloughs have been thrown off.

Where the bladder and the kidneys are very much involved a continuous temperature may indicate a disease of the latter organs, which should then be treated accordingly. Extravasion of urine and perineal abscess may occur, but it is improbable, as the tissues are practically seared and sealed by the burning process.

ESTIMATION OF HEMOGLOBIN.*

A COMPARISON OF THE VARIOUS METHODS.

BY B. M. LINNELL, M.D.

CHICAGO.

Most of the effort heretofore to arrive at an estimation of hemoglobin in blood has been made by means of the various color tests. These tests have multiplied until the catalogue of the various instruments resembles the list of "sure cure" remedies for the hives. This fact alone shows a dissatisfaction on the part of the clinician with the results obtained by the various color methods. The two instruments with which we are most familiar in this country are Von Fleischel's hemometer (the German), and Gower's (the English instrument.) The use of these instruments has demonstrated the sources of error as enumerated.

1. In color tests in general:

a. Two eyes rarely agree in accurate estimation of varying shades of color, thus producing individual variations.

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b. Eyes of the same individual vary at different times, due to fatigue and influence of varying ntensity of light.

I have made a test of 425 cases with students examining Fleischel's hemometer. The apparatus was prepared and placed where each student made the color comparison for himself without the knowledge of the other. The variations between the various readings were about 20 per cent. Thinking this error might be due to the inexperience of the observers, I made the test at a meeting of medical men, most of whom were accustomed to the use of the hemoglobinometer. The readings were as follows: A, 35; B, 39; C, 50; D, 48; E, 32; F, 30; G, 35; H, 39; I, 35; J, 42; K, 35; highest reading, 50; lowest, 30; average, 38.2; largest number of agreements of reading at 35, four. Two of the readers, F and J, are frequent users of this method, and their readings differed 12 per cent. The greatest variation was 20 per cent., the same as obtained by the students. A part of the error is accounted for by the limitations of the color test and part by the inaccuracies of the instrument used (Fleischel's).

The variations of the same eyes at different times is easily demonstrated by the observer making several readings of the same specimen, covering up the indicator while doing so each time. In my own case I have found variations of 10 per cent. with different readings of the same specimen. I have oftentimes found errors of like observation in others accustomed to use the hemoglobinometer.

2. Fleischel's instrument:

a. The errors common to color tests.

b. The normal standard of hemoglobin as represented by the instrument is too high for healthy American subjects; 80 to 85 per cent. represents nearer the normal of healthy male lives between the ages of 20 and 30, as indicated by Fleischel's instrument in this country.

c. The quantity of blood used in the test is so small that the least amount of variation in quantity used causes a great amount of variation in percentage. A difference of percentage results with a bulging or depression of the blood at the ends of the capillary tubes.

d. The area over the glass wedge under observation represents a variation of 20 per cent. The middle of the field must be picked out to obtain a correct estimate.

The above considerations have to deal entirely with the sources of error. The objections to the use of the instrument are the cost of the instrument and the necessity of using artificial light in the comparison.

3. Gower's instrument:

a. Errors common to color tests.

b. The colors of the standard tube and the hemoglobin solution are not always the same, and sometimes can not be brought to be the same. The hemoglobin often has a grayish-pink color, while the standard solution is more of an amber-pink to my eye. This makes great difficulty in comparing the shades. It makes it impossible in some cases to make an estimation of the hemoglobin.

c. In adding water to dilute the hemoglobin, one is apt to overdilute the solution, thus making it necessary to repeat the test.

d. One cannot make a number of estimates of the same specimen and strike an average.

It has the advantage of the use of a large quantity of blood, thus diminishing this source of error. The surface for comparison is larger and more uniform. The tests can be made by either natural or artificial light. It is a much cheaper instrument.

A rough method of estimation, which is a good one, is by comparing the patient's blood on a towel, handkerchief or white filter or blotting paper. This has the disadvantage of the general color test, and no table of comparison, but is easily and quickly made, and will be explained more in detail later on.

There is evidently a need for a more mechanic method of determining the percentage of hemoglobin. This seems to have been found in Hammerschlag's method, which consists in placing a drop of blood in a solution of benzol and chloroform. Add one or the other of the solutions to the mixture, as the drop floats or sinks, until it remains stationary in the center of the solution; then the specific gravity of the mixture will be that of the blood. This is a modification of the method of Roy, who used a number of bottles of salt and water graded from 1025 to 1075. Lloyd Jones elaborated this method, using glycerin and water, and had a case made containing twenty bottles of solutions of different specific gravity, which he called a hemobarometer. Owing to its simplicity, Hammerschlag's method has come into more general usse. This is the method used in my experiments. The normal specific gravity, as determined by Hammerschlag, is 1060.5 in healthy males of adult life. As shown by the tables in 28 observations made on 8 different persons, the average is 1060.3, the maximum observation being 1065, and the minimum 1056. The specific gravity in females is lower. In the 3 cases tabulated the maximum specific gravity is 1059.5; minimum, 1055; and average, 1057.5. The ages are all between 21 and 55, only one above 33.

In order to ascertain the amount of variation which takes place during a day under ordinary conditions, I made 17 tests on a male subject 21 years of age and in good health, during sixteen hours. The tests began at 8:30, after a breakfast, one hour previous, consisting of 1 cup of coffee, 2 slices of bread, 1 dish of rhubard. As seen by the table, the highest sp. gr. was 1065, taken at 8:30 a. m. The next specimen, taken at 10 a. m., was 1061. I have reason to believe the first test was wrong, as it did not reach such a high mark at any other time during the day. The most of the estimates were about 1061. Dinner, with 1 glass of water, 1 cup of coffee, and 6 oz. of water one hour later as fluids, was followed by no marked fall of sp. gr. The lowest point was reached at 5:30 p. m., and was 1058. After this test the subject took a half hour's spin on a bicycle, in the open air, coming back in a mild perspiration. The hemoglobin was found to be 1063. This was the greatest change during the day, a rise of 5 points. At 9:30 p. m. observations were resumed; sp. gr. 1061. The subject drank 18 oz. of water after test, which was followed by a fall of 1 point, to 1060, but returned to 1061 in two hours. The general average of the readings for the day was 1060.8. The blood count at 3:10 p. m. was 5,600,000; hemoglobin, Gower's, 96 per cent. The variations under normal circumstances are very slight, only 2 to 4 points. These observations were made at different points about town after riding, walking, sitting quietly, eating and drinking.

I now present a table showing a comparison of the sp. gr. with tests for hemoglobin and the counts of red blood-corpuscles, both in health and disease. It will be noted that the sp. gr. varies more with the variations in percentage of hemoglobin than with the corpuscle counts. In Case No. 2 is this especially true, the reduction due to secondary anemia, a case of pulmonary tuberculosis. The examinations were made at the same sitting, but the blood was taken from different locations on the body, namely, lobe of ear, great toe and finger. The sp. gr. varied 7 points, but so did the other esti-

mates in about like proportion. The variations were probably due to the fact that the blood did not flow so freely from the toe and ear as from the finger.

In Case No. 1, a normal, healthy subject, the difference is not so marked, only 1.5 points. The hemoglobin percentages did not vary so much, while the counts vary about the same as in Case No. 2.

In Case No. 3 the sp. gr. was 1044.5, while the five hemoglobin readings varied from 37 to 47, all made by different persons and with the same specimen, except one reading by Gower's method, which was 40 per cent., the average of all being 40.7, corresponding closely to Hammerschlag's table.

In Case No. 4, one of chlorosis in which the count was not recorded, the sp. gr. was 1046, and the average hemoglobin percentage 49.7 per cent. (Fleischel's), which again corresponded closely to the table. In Case No. 2 the average of the sp. gr. tests was 1051.3, the hemoglobin, 70.8, and count 4,300,000 reds, the sp. gr. being a little lower than the corresponding hemoglobin percentage in the table.

In taking the sp. gr. I found that a great saving of time was accomplished by having the necessary apparatus collected and kept together in the following described case, and in bedside examinations some such arrangements is quite necessary to secure the best results.

The apparatus consists of an ordinary urinometer and flask, 3 bottles with cork stoppers, one each containing chloroform, benzol, and a mixture of the two, 2 simple pipettes, a stirring rod, a few sheets of round filter paper, a pipette graduated to 20 cm., with rubber tubing and mouth-piece, a glass slide and cover-glasses, one-half-dozen pen-nibs, all arranged in a case with compartments for each article.

In making the test the following points are suggested for obtaining the more rapid and accurate results:

1. All of the apparatus must be perfectly clean and dry, especially the urinometer glass. The drop of blood will cling to the particles of blood or lint left in the glass and often flatten itself against the sides.

2. Before obtaining the drop of blood from the patient the benzol and chloroform mixture should be poured into the urinometer glass and brought to a little above that of the blood as estimated. A rough estimate may be made in two ways: 1. Compare a drop of the patient's blood with that of one of a known sp. gr., namely your own. If the colors differ widely, dilute a drop of your own blood by means of the graduated pipette, using ordinary clean water as a diluent, to about 50 per cent. The mixture can be made on the glass slide which accompanies the case. Compare this with the patient's blood. The sp. gr. of blood with 50 per cent. hemoglobin was about 1045.5. If the patient's blood is lighter than the central specimen diluted to 50 per cent., then the sp. gr. of the chloroform-benzol mixture should be started below 1045.5. If darker, the mixture should be higher. This method is recommended only when the blood seems to be greatly reduced in hemoglobin, and it presupposes knowledge of the per cent. of hemoglobin of the examiner's blood. This method forms a good test for a rough color estimate. By practice one becomes expert in the estimation.

3. The finger is usually selected by us as the most reliable place to obtain sufficient blood with one puncture. The side of the finger is preferred, as the subsequent discomfort is not so great.

4. The best and cheapest instrument for producing puncture is a sharp pen-nib with one point removed. A new one can be used with each patient, and thus the danger of infection is minimized. The same precautions in regard to not squeezing the blood out must be observed in this method as in all.

5. The mixture should be slightly above the sp. gr. of the blood, if possible, because in adding chloroform it is much easier and quicker to mix the two. As the heavier chloroform passes down through the mixture, it is partially mixed and is easily completed by slightly stirring with the glass rod. The lighter benzol, on being added, drop by drop, remains on the top, and either the urinometer glass has to be placed against the hand and carefully tipped upside-down, which is the better method when needed, or the contents must be agitated greatly with the glass rod in order to procure a uniform mixture.

6. In making estimations, I have found that the percentage of error is greatly reduced by using drops of about 10 cm. I draw about 15 cm. of blood up into the tube and then blow out 2 or 3 cm., wiping it away, then put 10 cm. into the mixture, leaving 2 or 3 cm. in the tube. The first and last portions of the blood are apt to contain either air or the water used in cleansing the pipette. Smaller drops of blood, however, do not vary the results materially if accuracy of technic is observed.

7. In mixing the benzol and chloroform it is much quicker and easier to use pipettes, pouring the solutions in drop by drop. In pouring out of a bottle it is very easy to pour too much and have to go over the process with the other solution. Then, the pipettes are more easily handled. In my laboratory I use bottles with ground-glass caps, with pipettes cut in lengths to suit and kept in the bottle.

8. The best kind of urinometer is one graded from 1025 to 1075. The spaces are wider, hence greater accuracy of reading is obtained. An ordinary urinometer, which is accurate up to 1060, will do, as pathologic conditions are such that readings with a higher sp. gr. are of no special clinic significance. The urinometers should be tested carefully to 1060. Most of them I have found erroneous in the higher numbers of the scale. The urinometer glass should stand firm and have a smooth rim to prevent the leaking of the solution when turned up against the hand.

9. In place of the graduated pipette a "white corpuscle counting" pipette from the hemocytometer may be used, or an ordinary glass tubing drawn out into a pipette. The case is so arranged that the corpuscle counter may also be carried to the bedside and a specimen taken for examination. The contents are prevented from escaping by a rubber band placed about the ends of the pipette. The case is made as small as possible, compatible with convenience and accuracy in its use. It may be obtained from Sharp & Smith, instrument makers, Chicago.

We need a system of estimating hemoglobin which will eliminate the necessary inaccuracies of color comparison.

The tests seem to show that the sp. gr. varies with the percentage of hemoglobin. Variations under normal conditions in blood are not great enough to interfere with the value of the sp. gr. test. Hammerschlag's is mechanically accurate and eliminates the necessary errors of color comparisons. The errors made in taking the blood are common to both methods.

DISCUSSION.

Dr. JUDSON DALAND, Philadelphia—So far as the color

tests are concerned, I believe the reader of the paper is correct when he states that all are objectionable. A certain percentage of error in the use of von Fleischel's instrument can be reduced. I have come to the conclusion that very frequently, in making our comparison by looking through the entire field of the cylinder of distilled water and diluted blood, the attempt to cover this broad surface in one view causes a certain percentage of error. About a year ago, at a meeting of the Philadelphia Pathological Society, I suggested that a cap be placed on the cylinder, containing a slit measuring one-eighth inch in width, made of any material, which would limit the field of observation, and thus reduce some of the errors of the instrument. Another error to be overcome is the distance at which the eye is held from the instrument; a distance of eight or nine inches is the best. A number of other interesting sources of error regarding von Fleischel's instrument might be mentioned, but time will not permit. I agree with the reader of the paper that we do not usually get 100 per cent. of hemoglobin; the percentage is usually lower.

It is also well to remember that if two pipettes or more be used, the reading will be more accurate in cases where the percentage of red blood-corpuscles is less than 50. Gower's instrument is seldom employed; it is subject to a wide range of error. Occasionally the colored tube of gelatin is decolorized in the course of time.

As regards the method described, I have had no personal knowledge as to its use. The percentage of blood pigment as determined by various methods differs greatly. From a long series of observations extending over a considerable period of time, it is necessary to determine which method is the best. The translation of the hemoglobin percentage is subject to considerable variations taking place in the plasma, but this percentage is not very great; it is exceedingly limited. Although it is true that the specific gravity of the blood is chiefly due to its contained hemoglobin, the plasma also contains substances that vary in disease. It is therefore manifest that the specific gravity of the blood should not be considered as the exact equivalent of the amount of blood pigment present.

DR. GEORGE DOCK, Ann Arbor, Mich.—I would like to corroborate everything the reader has stated regarding the advantages of the specific gravity method. It is easy to carry out. It must be borne in mind, however, that the specific gravity does not always correspond to the amount of hemoglobin present. A large amount of comparative observations with the specific gravity test and von Fleischel's hemometer have shown that hemoglobin chiefly affects the specific gravity, and there are few cases in which the readings do not correspond. Gower's method is much more faulty than von Fleischel's. In using the specific gravity method great care is necessary. If the estimation is difficult to make, a fresh drop should be used as a control, for in a trial which takes some time the density of the drop becomes altered by various causes. I have long taught that if one is limited to one method of estimating hemoglobin, Hammerschlag's specific gravity method should be chosen rather than Gower's instrument. The cap devised by Dr. Daland has for some years been a part of Meischer's modification of von Fleischel's instrument, a modification which also does away with several of the other sources of error in the old apparatus. The instrument is expensive, but we can hardly give up the estimation of the coloring matter of the blood, and for that purpose it should be preferred to the old apparatus or to that of Gower. The practitioner can, however, get along very well by the aid of Hammerschlag's method, carefully carried out.

DR. HORACE B. ARNOLD, Boston—I made quite a number of experiments this spring on the effect of chlorosis on the heart, using the color and specific gravity methods in these cases. The results obtained are important, especially in the case of chlorosis, where the hemoglobin has a low percentage; this might have been due to the heart changes or to error in the color tests. In this case there was particular satisfaction in using the specific gravity method. The comparison made between the color test and the specific gravity method by my assistants showed that they ran close. In considering the cases of chlorosis it is important to take count of the blood-corpuscles, because in some cases we find an improvement in the condition with an increase in the amount of hemoglobin, and an increase in the number of red blood-corpuscles out of proportion to the increase in the percentage of hemoglobin. So in this case apparently there is a diminution in the percentage of hemoglobin.

ANGINA PECTORIS.*

BY JAMES DUDLEY MORGAN, M.D.

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Pain is so seldom directly associated with serious diseases of the heart that most specialists and practitioners of medicine are wont to treat lightly a patient's anxious inquiry about the heart, and to dismiss the case with no particular guidance or injunction, as one having an imaginary or neurasthenic origin.

Though it has been considerably over one hundred years—1768—since Herbenden gave the name of angina pectoris to a certain affection of the heart, which he declared must be distinguished from ordinary cardiac dyspnea, and a few years later Edward Jenner described some of the morbid conditions, which may be found in this disease, yet there is to-day no one certain and positively accepted statement of the cause of this sudden taking off of a human being, who may have previously complained but little, or not at all, of feeling badly.

Since Herbenden's time nearly all medical writers and clinicians have had something to say of the etiology of angina pectoris. Desportes located the disturbance in the vagus; Laennec in the sympathetic; Jolly in the intercostal nerves; Brouillard in the phrenic nerve; Kirsch in the spinal cord; Piorry and Cahn placed it in the brachial plexus; Romberg, Peter and Lanaceaux in the cardiac plexus; Leyden, Potain and Charcot express opinions not in harmony with each other; v. Basch declares it to be sclerosis of the coronary arteries; Osler says that the disease is associated more particularly with sclerosis of the root of the aorta and changes in the coronary arteries and in the myocardium. Constantin Paul, of Lariboisiere Hospital, acknowledges the frequency of atheroma in patients who have died of angina pectoris, but when he considers the large numbers of patients at Bicêtre and la Salpetriere, who suffer from atheroma and are free from angina, he can not convince himself that the two diseases bear an undeniable casual relation to one another.

Kinnear believes the disturbance is due to hyperemia of the spinal sensory centers. Anders in his late "Practice" concerning the nature of angina, says: We possess few if any positive data; and conclusive post-mortem evidence in support of the various theories that have been and are advocated is, as yet, wanting.

Theodor Schott of Bad Nauheim, Germany, in a very recent article on the treatment of cardiac neuroses, speaks of: 1, angina pectoris nervosa; 2, angina pectoris vasomotoria, and this complaint he attributes to spasmodic contraction of the vessels, and mentions that besides the disturbances of a nervous character, there exist also other abnormal changes in the heart; 3, a form of angina pectoris he calls vera, and states it is more frequent than the nervosa or the vasomotoria, a statement with which the writer does not believe most practitioners will agree. Musser says angina pectoris in its typic form and in association with diseases of the heart is not of common occurrence. Schott goes on to speak of the difference of the pulse in true angina pectoris, which was not appreciable to the finger and only to be found in sphygmographic tracings and which often indicated arhythmia, tachycardia and bradycardia. He believes that the most frequent causes of this complaint are arteriosclerosis, chiefly of the coronary vessels, insufficiency and stenosis of the aortic valve, myocarditis, etc.,

*Read before the Medical and Surgical Society of Washington, D. C., April 6, 1899.

but he must confess that as yet the opinions of medical men concerning the nature of angina pectoris vera do not quite agree, but in general we are nowadays led to suppose that this disease is apt to affect the heart, when the latter has been enfeebled before.

These various affirmations and negations of conditions, which are necessarily found or are wanting in this much-discussed disease, are not brought forth to further mystify opinions, but with the desire that we may recall how little we know of angina pectoris and that a free discussion may engender more positive knowledge.

It could hardly be expected that this paper, in the time which is allotted, can take into consideration the numerous pseudo-anginas of the heart, for their causes are legion and spread over and ramify the body from migraine to podagra. It is freely admitted that cases of pseudo and true angina are sometimes associated, and that pseudo-angina may aggravate and precipitate an impending attack of true angina. The onset of this terrible disease is so sudden and startling, the suffering so great and agonizing, the termination so rapid and fearful, that consternation and fear seize both patient and friends. Balfour described the sensation of angina "as if a mailed hand grasped the chest in the cardiac region and squirted through its fingers flashes of excruciating agony."

A male, aged 42, who had previously shown no cardiac disturbance and was otherwise healthy and attending regularly to business, was seized on preparing to take his usual morning bath, with the most horrible constriction and agonizing pain in the chest. Within a half hour, after suffering untold torture with the agonies of pent-up life and suffocation, he died. At the autopsy, the left ventricle was dilated and the myocardium showed increased growth of connective tissue at the expense of the muscular tissue. The coronary arteries were in no sense occluded and the aorta was not sclerotic.

Another patient was a middle-aged married woman who had informed me that six years before, on a trip to Europe, she had been taken suddenly with the most fearful and terrifying pains over the region of the heart, associated with a sense of great suffocation, the heart feeling as if clamped within a vise; that Dr. Austin Flint, Sr., was aboard the steamer and attended her, and after some ten to fifteen minutes she was able to breathe more freely and was rid of the pain, but felt most profoundly shocked and depressed for the following twenty-four hours. He told her she had angina pectoris and must be careful in the future about her mode of living. She had no perceptible organic lesion. Being hastily summoned one day to her residence, which was some ten minutes' walk, I found she had suddenly been seized with a dagger-like pain in the heart and, exclaiming, "O, my heart," died within a few minutes. Autopsy revealed no morbid condition of the heart nor its vessels.

The writer has had what he considers a few cases of true angina pectoris, in which happily the fatal termination was at least postponed, and will present the notes of one or two, which seem most characteristic.

During the early hours of the morning, being hastily summoned to see a gentleman, aged 57, who was declared to be dying, I found the patient sitting upright in bed, with his hands over his heart, and laboring for breath. His hands and feet were cold, face blanched, pulse small and inclined to irregularity. He had a most distressing appearance, and I expected him to collapse at any moment. I gave him ether internally and nitrite of amyl to inhale, and applied heat over his heart and to his extremities; later on dry cups were applied over the chest. This patient recovered after a severe struggle, and within less than half an hour pain had ceased and breathing was more quiet; but it was three days before he could resume his journey to Boston. I was informed that the patient had a similar, but much lighter, attack, some eighteen months before. His heart showed no organic murmurs, but the rhythm was feeble. There was no perceptible arteriosclerosis. Examination of urine was negative.

Another patient, living to-day, whom the author attended some ten years ago for frequent attacks of angina pectoris, has some interesting points connected with his case. He was a man about 40 years of age, of no bad habits nor history, inclined somewhat to corpulency, but had no digestive disturbances, nor was he in any way a neurasthenic. For a man of his size and strength, he had what you might call a feeble and somewhat compressible pulse. The heart showed no intrinsic nor extrinsic disturbance. The urine was repeatedly examined with negative results. The gentleman has had some eight or ten characteristic attacks of angina pectoris, extending over several years, and but for speedy help and remedies, which he has been taught to keep on hand, he would have, it appeared, died in one of these attacks. The treatment consisted in a complete change in his mode of living. He was made to work less, and take moderate exercise; was forbidden alcohol in any shape, and less nitrogenous food was eaten; he was to lie down after bathing; take a midday siesta, and lead a life which would in every way relieve the demands on the heart. Massage was used and the precordial region was kept slightly irritated for months, and hot footbaths were given at night. His slight indulgence in both coffeee and tobacco was stopped, and he was ordered ether, iodid of potassium and trinitrin, which he took on different occasions, extending over a period of nearly a year. On retiring at night he was ordered to give himself a hot saline enema, which had a most salutary and beneficial effect on the various emunctories, besides giving tone, without tension, to a somewhat enfeebled arterial circulation. His bedroom was changed from the first to the third floor. His trips away were to the mountains instead of to the lowlands and seashore. This patient has not had an attack for eighteen months, and his wife and self are congratulating themselves that there will be no recurrence. He may yet die suddenly of this affection, for we are too often deceived, when we relax our vigilance and persuade ourselves that recovery is in sight.

William Pepper, who suffered for some seven years from premonitions of angina pectoris, was joyous and hopeful that compensation was taking place and remarked to his physician but a few days before his death that "the battle had been won." "At seven in the evening," his physician writes, "I left him gazing upon Mount Diablo, shadowed in the gathering darkness. I was called at 8. I found him in the attitude and with the expression of angor animi, from which he never aroused. At the time of his death he was recovering the lost cardiac compensation and appeared on the clear road to recovery."

Any affection of the heart or systemic system, which may disturb the regular and proper supply of blood to the coronary arteries, may precipitate an attack of angina pectoris. The danger lies in the myocardium not receiving sufficient blood for its nutrition and so cause the generation and accumulation of toxins,

which poison and depress the heart, and allow of an abnormal distension of its cavities. This distension of the heart and interference with its nutrition accounts for the great pain and distress in the precordial region. Smirnow, in speaking of the dilation and distension with blood, which the heart undergoes in the paroxysm of angina, attributes the torturing precordial pain to the stretching of the net-work of afferent nerve-fibrils, which are immediately beneath the endocardium.

The quality of the blood supplied to the nutrition of the heart is the cause of many true anginas of the heart. The effects of blood changes on the heart have been investigated by several authors. Ringer found that without the presence of a lime salt in the circulating fluid, contractility of the isolated frog's ventricle cannot be supported. He also found that the production of acid, particularly that which is formed in the course of, and as the result of, muscular contraction, is also inimical to cardiac contraction. A toxin within the blood depresses the heart, increases the length of the systole and finally causes a standstill in diastole. The accumulation in the heart's substance of a toxic material seems to act on the cardic ganglia in such a way as to destroy the heart's excitability. Any slight obstruction of the supply of blood to any part of the myocardium leads quickly to the generation of a toxin. Cohnheim says the closure of one or both coronary arteries is not necessary, any one branch of a certain size, no matter which, is sufficient to produce a limited arterial ischemia, which in such deadly manner paralyzes irrestorably the whole cardiac musculature. The effect of this deficient nutrition is the product of a heart poison, a product of metabolism, which is in a normal state carried off in the course of the blood-current, but which accumulates under defective nutrition in the substance of the heart.

What makes the action of the heart regular? It is the change of nutrition, by which, through the blood circulating in its substance, the waste of its tissue is constantly supplied, the integrity of the fibers preserved and kept consequently in a condition to contract. If the supply of blood is cut off from the substance of the heart, the organ soon loses its irritability and power of contraction. Cohnheim and Schulthess-Rechberg, in experiments on dogs, observed that ligation of any large branch of either right or left coronary "has at first no effect whatever upon the rhythm or vigor of the cardiac contraction, nor consequently upon the blood pressure, but after the lapse of ninety seconds on an average, the heart beats begin to be somewhat irregular and infrequent, yet still without affecting the blood pressure, till suddenly and at the same instant both chambers stop in diastole. From this standstill, which occurs on an average not later than two minutes, there are no means of arousing the ventricles to new life and renewed contraction. It seems as if a deadly poison had forever destroyed the heart's excitability. Accordingly it is in all probability the system of ganglia which is affected in this fashion."

It would seemfrom all the facts at hand, clinic, pathologic and physiologic, that whereas sclerosis of the coronary arteries or aorta, or dilation of the heart, etc., is found in a large number of cases of angina pectoris, yet attacks of true angina may occur in patients who are entirely free from organic disease of the heart, and, vice versa, we may find most extreme calcareous conditions of the coronary arteries to exist, as in a pathologic specimen I have, from the patient living to some 60 years of age, with no obtainable history of cardiac distress, and dying of a complaint entirely foreign to angina pectoris. Frey maintains that stoppage of the heart in angina is not a necessary result of closure of a large branch of the coronary arteries, but may be brought about by numerous other interferences with the heart.

In our treatment we must ever keep in view the picture of the heart whose muscular structure is improperly nourished, whose ventricles are suddenly distended, and whose nerve and muscular fibers are stretched, and I might say stunned, by the rapid engorgement of a circulating fluid, which from the apparent embarrassment in respiration, becomes poorly oxygenated. Relieve the tension of the vascular system by inhalation of nitrite of amyl, and if pain persists, give a few whiffs of ether, which, as there is danger of heart failure, is to be preferred to chloroform on account of its stimulating effects. Morphia should not be continuously used because of its resulting depression, and if given should always be combined with atropia, which is an excellent analeptic. Camphor, also, is one of the best of the cardiac stimulants. Irritation, in the way of sinapisms, etc., to the precordia, eases the distress. The ice-bag or very hot applications have the same effect. The kidneys, skin and respiratory functions should be kept active. In the interval nitroglycerin or nitrite of sodium and iodid of potassium should be used, and the doses should be pushed to tolerance. Good results are obtained from the baths as recommended by the Oertel's method or as carried out by Dr. Schott of Nauheim. A saline bath at the temperature of 92 and reduced 5 or 6 degrees in the course of the treatment has many of the good effects of the Nauheim bath. It is well in ordering the bath to see that your patient is gently massaged, and while in the bath, which should last not longer than ten to fifteen minutes, that slight restraint be given to the flexion and extension of the limbs and body, which the patient is directed to follow. These movements draw blood to the parts and lessen the arterial tension in the system, and with the stimulating effects of the bath have a most beneficial and somewhat lasting good effect on the heart and circulation, the blood pressure being lowered, the diastolic rest of the heart lengthened, and the force of the systole increased. The result is, the ventricles are fully emptied, the peripheral resistance lessened, the whole circulation becomes freer and more active and changes in metabolism promoted, and a general well-being of the patient is noticed. With the results of the use of electricity some claim good results, but it may be said that electricity seems to be more of an adjuvant than a curative agent. To obtain any measure of success in our treatment all excesses of every kind must be corrected and the general functions of the body made to act properly.

919 McPherson Square.

TUBERCULAR PELVIC PERITONITIS.

BY CHARLES C. ALLISON, M.D.

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OMAHA, NEB.

It seems to be generally held that the lymphatic system affords the main avenue for tubercular invasion. Thus in children, whose exposed facial integument, with repeated abrasions, invites a tubercular cervical adenolymphangitis,(1) in the adult the nasopharyngeal space, directly exposed to multiple bacterial irritations, favors this predisposition an entrance into the lymph-channels and, with suitable soil, general dissemination through the larger ducts to the bronchial and mediasti-

[1] De Forrest Willard: Annals of Surgery.

nal glands. Through the same system a tubercular invasion may develop from the genital lymphatics, with easy access to the histologically allied tissue—the serous peritoneum. These neighboring glands in the process of caseation may directly infect the peritoneum, or a hematogenic deposit in this region of recurrent congestions may follow as a secondary expression of a distant tuberculosis. From the intestinal canal also an ulceration may allow the tubercle bacilli to reach the peritoneum, and thus start the destructive process on this organ.

Reasons are manifest, therefore, for the exposure of the general peritoneum to this disease, while there seems to be a strong analogy between the elective area in children—the cervical and bronchial lymphatics—where the surface of the body offers least resistance, and in the invasion of the pelvic peritoneum, occurring as it usually does in females between the ages of 20 and 40 years, during which time there is most exposure to the lymphatic system in the pelvic region.

That tubal tuberculosis is elective seems well established by an analysis of 1200 autopsies by Wothen, (2) in which 20 per cent. showed tubal deposits, involving in every case the peritoneum and in the majority of cases the tubal mucosa. This relatively large proportion of tubal disease includes primary deposits only, without general peritoneal or other tubercular expressions.

Studying this disease, therefore, as a pelvic manifestation, we find its occurrence bearing a direct relation to the circulatory changes and the lymphatic engorgements which occur with greatest frequency during the functional activity of the genital system. In either case the tubercle bacilli may primarily enter the lymphatic space, or they may gain entrance through a soil previously exposed by protracted multiple bacterial infection. The types of this disease are usually well-defined, and may be said to occur in three forms.

The acute miliary form generally involves the entire peritoneum and presents a well-marked train of an acute systemic disease, with early ascitic accumulations, attended by fever, emaciation, and as a rule the general expression of a well-defined tubercular disease. The chronic caseous type of inflammation is attended by a local collection of purulent material with extensive adhesions, tissue degeneration, involving the intestinal tract. The chronic fibrous type is a more subacute form, or it may be a late stage of the types mentioned, and is attended by a dense fibroplastic exudate, a small amount of blood-stained fluid in the cavity, and as a clinic evidence, nodular masses may be felt in the pelvis, and as pointed out by Kelly, these enlargements are apt to change their relations with the pelvic organs from time to time.

The prognosis of this disease is good, although some diversity of opinion is entertained by different writers on its ultimate termination. So able and experienced a man as Munde recently said that he had not yet seen, in his own experience, one case go on to complete recovery; yet, he added, other practitioners report successful terminations, and he expects to be able to score greater success in the future.

That this disease subsides without treatment is admitted. The process of involution leaves but slight thickening in the shape of fibroplastic or pigmentary changes as traces of what was once well defined tubercular disease.

[2] Med. News, Nov. 18, 1898.

Symptoms.—Pelvic pain is regarded as a very constant expression of this disease, although the symptomatology takes a very wide range, and a marked development of this trouble may remain for a long time unrecognized. The increased thickness of the pelvic peritoneum, due to the tubercular inflammatory process, may be looked on as the cause of frequent and painful micturition, which is a fairly constant symptom.

Should this type becoome chronic and assume the fibrous form, partial fixation of the uterus, with irregular pelvic indurations, will be noted. The local tenderness and the low septic range of temperature will be of value in directing attention to the nature of the trouble, while a curettage may lead to very conclusive evidence, if the bacilli are found in the debris. Local ascitic accumulations in the pelvis, in this disease, may increase in size until there is marked abdominal enlargement, yet the general peritoneum remain uninvolved. In two cases we have met this condition, and in one tubercular masses in the pelvic omentum gave the first opportunity for certain diagnosis.

Treatment.—The outcome of these cases has grown to be recognized as more successful, since 1862, when Sir Spencer Wells recorded a recovery after celiotomy. The unmistakable spontaneous recoveries that are met are also an evidence of the favorable response which may be expected under intelligent treatment, and while medicinal and hygienic treatment must be accorded a very useful place in the therapeutic measures employed in the management of this disease, yet exploration of the abdominal cavity has led to convalescence in so large a number of cases, and at the hands of so many observers, that surgical treatment must be looked on as promising.

In the employment of surgical measures, our care must be directed not only toward the removal of extensively diseased organs, but to the release of adhesions, when these adhesions threaten the welfare of the patient, and this is more particularly true in the caseous type, which may usually be regarded as the most serious form of trouble; yet it is true that in the recent miliary invasion, or in a fibroplastic involvement the simple abdominal exploration, with salient irrigation, without drainage, is the appropriate and conservative measure which promises the largest number of recoveries.

The reason for such convalescence may be accounted for by the relief of pressure, the removal of ptomains, and gain in nutrition, with the inhibitory effect on the tubercle bacilli of the phagocytic process thus established. And although Gregg Smith records as his most unexpected recovery a case of operative infection, yet we should take all surgical precautions against the introduction of sepsis.

Representative of the fibrous type of this disease is the case of a multipara, 52 years old, who for several weeks complained of severe pain in the right lower quadrant of the abdomen, in whom a bimanual examination revealed a firm mass fixing the right tube; the temperature ranged between 99 and 101 degrees, micturition was frequent and painful, and marked tympany and constipation were present. Abdominal exploration revealed a dense mass involving the cecum, some coils of the ilium, the right tube and ovary. The peritoneum was much thickened and removal of this extensive pelvic involvement was clearly inadvisable. The abdomen was closed without drainage, and at one and a half years after the operation the patient's condition remains good.

A caseous form of tubercular inflammation with very large cystic accumulation was met in a patient 35 years old, multipara, whose trouble was fairly acute, the

symptoms having been in evidence but a few weeks. Pronounced pain, fixation of the pelvic organs, dysuria, constipation, and notable emaciation were the leading symptoms.

Exploration revealed a large tubercular cyst springing from the left tube, with nodules scattered over the pelvic peritoneum and involving the omentum. Removing this cyst and the affected part of the omentum, with irrigation and drainage, was followd by a convalescence in which, one year later, was found a postuterine tenesmus; vaginal tampons of guaiacol and oil led to a disappearance of the enlargement, and to a symptomatic recovery.

A third case was met in a nullipara, aged 31, whose disease had been present for several months, and in whom the symptom of pain was not leading, but disturbed digestion, loss of weight, partial fixation of the pelvic organs and marked rectal tenesmus were prominent symptoms. A large tubercular cyst was found on exploration, springing from the left side of the pelvis, and surrounding the base of which broken-down glands and purulent material were found. The cyst was removed, the pelvic deposits evacuated, with free irrigation and drainage, followed by convalescence, in which case an unfavorable termination was expected, and this points to similar experiences at the hands of others, which go to prove that a tubercular peritoneum loses, in a large measure, its susceptibility to other forms of bacterial inflammation

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DISEASES IN SCHOOLS*.

SPREAD AND PREVENTION.
BY LAMBERT OTT, M.D.
PHILADELPHIA.

By reason of my twelve years' intimate association with a school section of Philadelphia, having thirteen schools and 6031 children—5224 being in primary grades, ranging from 6 to 10 years of age, and the remainder in grammar grades—I have been able to make some valuable observations.

A trite remark of mothers, often heard by the family practitioner is: "My children were free from disease until they began attending school," and I can bear testimony to the truth of this saying, not alone from an experience in my own household, but also from the multitude of evidence gained otherwise.

One thing is evident: that there is an increase of contagious diseases during the continuance of the school period. The condemnation of Froebel's kindergarten schools is based on the necessary aggregation of little children in those tender years, when the susceptibility to contagious diseases is at its height. It is claimed that home teaching, and its consequent isolation, enhances the child's chances of attaining maturity while it lessens the possibility of other children obtaining disease. I have often watched little children in schoolrooms, in and out of session, especially when seated at double desks, and have been impressed with their frequent and close personal contact, such as placing their faces together, blowing in each other's faces in a banter and, when scrutinizing a fellow pupil's work, bringing the inspiratory current in a direct cross line of the other's expiration. It often amazes me how careless physicians are in permitting children of an infected house to attend school, catering to the whims of parents, who from stupidity or vicious indifference would rather see others contaminated than have their own children lose time by enforced absence.

The disease usually spread in schools, naming in the order of their frequency, are: diphtheria, scarlet fever, measles, whooping-cough, varicella and variola, or varioloid. There are three sources of danger; 1, being in school during the inception and development of the disease; 2, returning to school too early in the convalescence, or permitting children of an infected household to attend school; 3, in daily attendance in school during a light and overlooked attack of contagious disease.

When any of the contagious diseases occurred among children of my patrons I found in many instances that a child in the next seat had previously been absent on account of sickness, and often had the same disease as the child I was attending. In some cases I was unable to find the source of personal infection in that special classroom, but in contiguous classrooms on the same floor children had been absent with the same disease, and had but recently returned to school; from this I concluded that the mode of contamination was during recess. I have asked other physicians to investigate similarly, and they have had a like experience. One practitioner, of very large experience, stated that he believed seven-eighths of the contagious diseases in children were contracted in school.

I believe the most damage is done by children being in school during the inception and development of contagious diseases, and by a too early return during convalescence. When we consider the insidiousness of the period of incubation in children's diseases, and how often in their early stages the ambitious child will conceal its ills, knowing that absence lessens its chances of promotion, we readily understand why children are frequently found in filled classrooms with the diphtheria patch well developed in the throat, the scarlet-fever case either with a mild rash or an increasing fever preluding its appearance, or the child who will ultimately develop whooping-cough remaining in school, with that apparently innocent preliminary cough to spread its contagion. One can scarcely believe that fully-developed contagious disease could remain among forty or fifty children any length of time without being discovered, but this I have repeatedly seen. In several instances I have noticed children with their necks tied up, and on examination found them suffering with a light form of tonsillar diphtheria, or, if not with diphtheria, always sufficiently pronounced to alarm me. I have also found in several mild cases of scarlet fever in the class-room, and have frequently found children coughing suddenly in starts, and soon after detained at home with well-developed whooping-cough.

The commoner means of contamination are: by personal contact, inspiring exhalations, kissing; by the common use of a drinking cup; by exchanging working material, such as pencils, cleansing rags, or by passing around from mouth to mouth a whistle or a mouth-organ. The habit of children kissing one another, carrying the end of a lead or slate pencil to the mouth, lending it to a neighbor who also carries it to his mouth, prior to using it, is common.

A grave question arises, viz.:—When should we permit children to return to school during the convalescence of contagious diseases? My practice has been to recommend the return after the following lapse of time.

1. Diphtheria, four weeks from its inception and one week in the open air.

*Presented to the Section on Practice of Medicine, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

2. Scarlet fever, four weeks from its inception and one week in the open air.

3. Measles, two weeks from its inception and one week in the open air.

4. Whooping-cough, not until every vestige of the cough has disappeared.

5. Smallpox, two months from its inception and one month in the open air. Some physicians have considered this time as too long, and have also undervalued the one week of out-door life. My answer to them has been, "Where is there a better ventilator of body and clothing than a romping out-door life for a convalescent child?"

We have not only the improved general tone, but a removal of the contagious element—germ which it undoubtedly is—and a consequent lessened possibility of imparting the contagion to the healthy children with whom they at once come in contact. I hold that these restrictions should be regulated and enforced by special enactment, for when left to the too-eager mother to get her child soon into school again, or the easy-going physician, who too often caters to the whims of his patrons, they will fail of their purpose unless supported in the form of a law.

The question may be asked, "Why should all diphtheria cases be detained from school five weeks?" If we should determine the time by the bacteriologist's report, then a much longer time would be necessary. In Philadelphia physicians have sent material obtained from the throats of cases apparently recovered from diphtheria to the city bacteriologist, in the sixth week from the inception of the disease, and after being two weeks out of doors; he reported, microscopically, a number of Klebs-Loeffler bacilli present. I do not believe any one is able to positively state when the last scale of the desquamation of scarlet fever has disappeared from a child, and that there is no possibility of further contagion. Therefore, if there is ever possible an element of doubt, why not allot ample time for their convalescence, and err on the safer side? It is a bad and vicious rule to permit one child to advance by hazarding the lives of fifty others. Parents usually object to the length of time, claiming it is an unnecessary hardship, but how few mothers understand this danger, and yet you will find this same mother offering the most strenuous objections when her child is exposed to this danger to which she subjects others by returning the convalescent too soon.

The fact that contagious diseases of childhood are preeminently spread in schools is accepted by the medical and lay public, and yet how tardy have been the efforts toward instituting preventive measures. Every physician can recall some loving, earnest mother among his patrons who has learned to distinguish between the lighter and the major ills of her children, and when such a mother calls for your services, you at once, and rightly, conclude that there is something radically wrong. Why not have every teacher acquire this training, and learn to distinguish a normal from an abnormal throat, to discern the flush of fever, scarlet rash, and any suspicious cough that might lead to pertussis? A few clinic lessons added to her curriculum, and making this a part of her qualifications necessary to acquire a certificate as a teacher, is not only feasible, but practicable, and will be followed by beneficent results. I hope to see the day in which every school teacher is thus qualified to distinguish children's diseases, and with the argus eyes always on the many little ones, what better means have we to prevent the spread of contagious diseases in schools? She should not only be taught the differential points, but the means of contamination, which she can in turn impart to other pupils. A daily medical inspection is in vogue in some of the European and American cities, but this will only be occasionally necessary if teachers receive the proper instructions. When teachers are qualified in practical clinic essentials, they can make it their morning duty to have the pupils pass in single file, and, if watchful, they will learn to discover the suffused cheek, the dull eye and the heavy countenance. Any child trivially ill is at once sent home with a note of explanation, requesting the attendance of a family physician.

The law of Pennsylvania, compelling children admitted to school to present a certificate of successful vaccination, signed by a physician, is signally defective, for there is no doubt that a number of certificates are forged, by which means parents opposed to vaccination evade the law. An amendment to the law has been passed, to admit children who after repeated trials will not "take" the vaccin virus, which must be confirmed by a qualified physician, but I have never yet found a child who did not respond to primary vaccination, when properly done with fresh and healthy vaccin lymph. The law, by which the physician's signature should be authenticated, should be more stringent, thereby barring any possibility of deception. If it is an accepted fact, and I believe it is in Philadelphia, that enforcing the vaccination law has stamped out smallpox, why not give more attention to preventing the spread of other contagious diseases in all schools, instead of the belated attention of posting a yellow label over the door of the unfortunate victim? This tabooing the infected household prevents the usual intercourse of neighbors, which in itself is advantageous, but it unfortunately leads, on the part of the doctor and family, to collusively withholding such information from the proper authorities, thereby rendering the source of infection more dangerous by inattention to details, and the proper care against intruders.

The Philadelphia Board of Health forbids principals receiving such children in school, reported with infectious diseases, until they notify them when they may be safely returned to their classrooms. In many health boards, prophylaxis does not receive the attention it should, and the major work in that line should be directed within our schools. There should be in every city, as in Philadelphia, where there are 150,000 children attending the public schools, and probably 50,000 in parochial and private schools, a school medical superintendent, with sufficient salary to enable him to devote his entire time to his work, and a complement of qualified assistants apportioned to the different districts, whose duties should be to inspect school buildings, to trace sources of infection, to respond to the call of principals or teachers for the examination of suspicious cases, and especially to guard a classroom of children where any contagion has developed and is likely to spread. Such a board, properly salaried and organized, would in the course of time develop a fund of practical details, which would reduce to a minimum the spread of contagious diseases in our schools. Their work could also be that of instructing teachers in recognizing infectious diseases in their early stages, or where there is need of watchful attention, to aid and guide them in hygienic measures. His duties should be in part to see to the proper physical training of pupils, to the proper posture to be observed in sitting and writing, to suggest remedies against the enormously grow-

ing evil, especially in our public schools, of stooping, and thus acquiring round shoulders, and to superintend the voice and lung gymnastics so essential in the developmental periods of life.

Why should it not be the morning duty of each teacher to inquire of her class whether any child present has headache, sore throat, sick stomach or pain, or is feeling ill in any way? Such children complaining should at once be examined by the visiting medical inspector, and, if sick, should be sent home, or, if malingering, returned to the classroom. Believing, as we do, that infection is for the most part spread by children sitting in school during the inception and development of contagious diseases, the danger, therefore, can be minimized by early detection through these interrogatories, supplemented by a medical examination, which renders it nearly impossible for a child to remain in school two or three days with a diphtheritic patch the throat or a developing exanthemata. Or, if this procedure be objectionable, the teacher can in the early part of the term, or once a week if necessary, instruct her pupils to report immediately when ill.

In Brussels the schools are visited weekly by trained medical inspectors, who look after all matters pertaining to the health of the pupils, in suspicious cases examining the eyes for optical defects, and in frail children suggesting such work and physical training as accords with their capabilities.

DISCUSSION.

Dr. HORACE B. ARNOLD, Boston—In November, 1894, we started a system of school inspection by physicians. The city was divided into fifty districts, and one examiner was appointed for each district. A visit was made to the schools each morning. The plan was as follows: Immediately on the assemblage of the school children, the teacher looked them over and decided whether any child was ailing. If any child was found ailing, word was sent to the mother and a notice given to the medical examiner. The medical examiner examined the child and determined the trouble, and, if contagious, or if detrimental to the health of the other children, the case was sent home. We dealt with an extensive run of contagious diseases in the city and many cases in the public schools. During the first year—fourteen months—there were 16,790 pupils examined in the schools; of this number, 6,053 were not sick, but 10,737 were found to be ill, among which number 2,041 were sick enough to be sent home; 453 had contagious diseases and would have been sources of infection through the schools. Since that time the number of contagious diseases in the schools and city has suddenly diminished. In my ward, during the past year—as school inspector—I found more cases that contracted the disease outside the schools than inside. The physicians are obliged by law to report cases of contagious diseases to the Board of Health, when the examiner visits the case to learn if proper isolation, etc., has been carried out; if not properly carried out, the case is removed to the hospital. As a result of this practice, the results have been remarkable, for there are fewer cases of contagious diseases in the tenements than in the well-to-do classes. The reason is that since the new contagious hospital can accommodate all the cases that have their origin in the tenement districts, the prompt removal of the cases to the hospital limits the spread of the diseases.

Regarding Dr. Ott's opinion as to the period at which the child should be allowed to return to school, I believe it is too short. In watching a number of cases of scarlet fever, I found desquamation occurring five and one-half weeks. Dr. Cullom places the average period of desquamation at fifty days. As regards diphtheria, the child should not be allowed to return so long as the Klebs-Loeffler bacilli are demonstrable.

Dr. RAYBURN, Washington, D. C.—Another important point is regarding sending children to school too early in life. No child should be sent to school before the age of seven years. In Washington we have about 50,000 children who attend school. The idea of sending children to school at the ages of 4 or 6 is wrong. At this early period they take diseases easily. Children should not be sent to the primary department before the age of 7 years and no child should be kept in one session more than four hours in length; only an exceptional child is able to bear the strain on the system for a longer period of time. In other words, no child should come to school before the age of 7 years. The trouble is that the public school system has grown too much. One should bear in mind that the children need sound bodies as well as sound minds.

Dr. BRAGDON, Minneapolis, Minn.—Any one who studies infectious diseases knows that they increase in number during the school period. Any one who studies inspection of schools will admit that Boston has the best system. Teachers can make inspection and they can help, but not without medical inspectors; teachers working with the medical inspectors give the best results. The time limit for scarlet fever and measles may be made, but not for diphtheria; some cases of the latter may not be safe for six weeks, and some not for six or eight weeks, before they may be sent back to the school. Its contagiousness is through direct infection and not through the air. In many instances the bacilli may be in the throat, although there may be no symptoms. If we exclude children with clinic diphtheria, we should exclude children who have bacilli in their throats. The time limit of four weeks is not long enough for scarlet fever, although some cases may be safe in less than that time.

Dr. E. R. AXTELL, Denver.—The statement of Dr. Ott regarding the indiscriminate use of lead pencils is a true one. Two years ago I suggested to a lead pencil manufacturer that he incorporate quinin or some bad-tasting substance with the graphite, but nothing came of it. In the private schools in Denver we had trouble with diphtheria, and I have made visits there from time to time and found patches of diphtheria in the throat.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

American Journal of Obstetrics (N. Y.), June.

1.—*Treatment of Labor in Abnormal Pelvis. Edward P. Davis.
2.—*Surgery of the Puerperium. Denslow Lewis.
3.—*The Walcher, the Trendelenburg and the Mercurio Postures in Midwifery. Robert L. Dickinson.
4.—*Prophylaxis and Treatment of Puerperal Fever, with Report of Three Cases of Streptococcus Infection Successfully Treated with Antistreptococcic Serum. John F. Moran.
5.—*Occurrence of Streptococcus Pyogenes in Gynecologic Diseases. G. Brown Miller.
6.—*Some Considerations on Gonorrhea in the Female. E. E. Morse.
7.— Case of Symphyseotomy. John F. Moran.
8.—*Intestinal Obstruction from Ascarides Basil. M. Taylor.

Yale Medical Journal (New Haven), June.

9.— Malignant Disease of Uterus, Diagnosis and Treatment. F. H. Wiggins.
10.—*Progress of Medicine. O. T. Osborne.
11.—*Insanity in its Medicolegal Relations. Gustavus Eliot.
12.—*Lymphoid Hypertrophies of the Pharyngeal Vault. Carl E. Munger.

Pacific Medical Journal (San Francisco), June.

13.—*Doctor as a Medical Jurist. C. K. Bonestell.
14.—*Treatment of Bronchopneumonia in Children. D. A. Hodghead.
15.—*Belladonna in Treatment of Bronchopneumonia in Children. J. A. Coutts.
16.— Parasite and Pathology of Malaria. F. H. Whitsitt.
17.— Hydrocele. J. P. LeFevre.
18.—*General Practitioner in Relation to Insane. Ernest Hall.
19.— Relation between Hyperchlorhydria and Motor Derangements of Stomach. A. W. Perry.

Therapeutic Gazette (Detroit, Mich.), June 1.

20.—*Treatment of Cardiac Asthenia in Pneumonia. H. L. Elsner.
21.—*Report of Two Cases of Laparotomy for Perforation in Typhoid. W. J. Taylor.
22.—*Evolution of Modern Therapy. Simon Baruch.
23.—*Employment of Kalt Suture in Critical Cases of Cataract Extraction. S. D. Risley.
24.— Cutaneous Burns and Treatment. Ellice M. Alger.

Western Medical Review (Lincoln, Neb.), June 15.

25.—*Modification in Operative Method of Inveterate and Relapsed Cases of Talipes Equinovarus. A. F. Jonas.
26.—*Day in the Country with a General Practitioner. G. R. Highsmith.
27.—*Lead Ileus Mistaken for Appendicitis. J. P. Lord.
28.— Circulation of Blood in Sick. T. L. Putman.
29.—*Empyema of Gall-Bladder. J. F. Summers.

Louisville Journal of Medicine and Surgery, June.

30.—*President's Address. J. M. Mathews.
31.— Address of Welcome. T. L. McDermott.
32.— Typhoid Fever. E. N. Hall.
33.—*Burns and Scalds. J. S. Leech.
34.—*Accidental Separation of Symphysis Pubis During Labor. B. S. Rutherford.

Denver Medical Times, June.

35.— Commencement Address. A. B. Seaman.
36.—*Puerperal Sepsis, is it always Preventable? A. H. Garnett.
37.—*Acute Bronchopneumonia in Children. C. P. Hough.
38.— Ancient vs. Modern Therapeutics. J. R. Baer.

Colorado Medical Journal (Denver), June.

39.—*Methods and Results in 175 Cases of Simple Fracture of Femur. C. A. Powers.
40.— Injuries Occurring in Minnesota Mines. W. E. Harwood.
41.—*Unusual Course of Dissecting Aneurysm of Ascending Aorta. W. E. Shotwell.

42.— Floating Cartilage in Knee-Joint. Frank Finney.
43.— Report of Case of Tetany in Adult. E. C. Hill.
44.— Life in West Africa. A. L. Bennett.

Richmond (Va.) Journal of Practice, May.

45.—*Diagnosis of Abdominal Contusions with Hollow Visceral Lesions. H. M. Taylor.
46.— Limitations of Conservative Surgery of Female Generative Organs. G. B. Johnson.
47.—*Case of Inversion of Uterus, Treated by Thomas' Method. Henry C. Coe.
48.— Report of Case of Rupture of Liver. Ed. C. Field.

Medical Herald (St. Joseph, Mo.), May.

49.—*Pulsating Pleurisy, with Report of Remarkable Case. F. P. Henry.
50.— Importance of Giving More Attention to Diseases of Children. A. W. Hon.
51.—*Some of the Black Arts in Medicine. J. T. Davis.
52.—*Proteolytic Value of Malt. C. H. Miller.
53.— Merits of a True Sanitarium and Where It Should be Located. Paul Paquin.
54.—N. Y. State Medical Society and the Code of Ethics. N. G. Richmond.

Pacific Record of Medicine and Surgery (San Francisco), May 15.

55.—*President's Address. W. W. Kerr.
56.—*Diagnosis of Primary Cerebrospinal Meningitis. W. F. Cheney.
57.—*Clinical Aspects of Muscle Affections. H. C. Moffit.
58.—*Why Are so Many Young People Wearing Glasses? V. H. Hulen.

Atlanta Journal-Record of Medicine (Ga.), June.

59.—*Treatment, Medical Complications and Sequelæ of Typhoid Fever. H. A. Hare.
60.—*Endoscopic Treatment of Chronic Urethritis. W. L. Champion.
61.—*Seven Cases of Diphtheritic Croup—Two Aborted by Antitoxin and Five Cured by Antitoxin and Intubation. R. M. Harbin.
62.— Treatment of Some Cases of Cancer of the Skin. B. M. Hutchins.

Tri-State Medical Journal and Practitioner (St. Louis), May.

63.—*Let the term "Amputation" be Abolished. T. N. Manley.
64.—*Tent Life for Invalids in Colorado. C. F. Gardiner.
65.—*Peritoneal Adhesions. Byron Robinson.
66.— Dislocation of Spine, with Report of Two Cases. J. H. Austin.

Merck's Archives (N. Y.), June.

67.—*Ichthalbin in Pediatrics. Th. Homburger.
68.— Theory of Urotropin, with Report of Some Personal Experiences. Herman Schlier.
69.— Contribution on Therapeutic Action of Triphenin. A. G. Servoss.
70.— Treatment of Acute Enterocolitis. E. C. Kenner.
71.— Original Researches with Salts of Strontium. L. L. Solomon.

Medical Sentinel (Portland, Ore.), June.

72.—*New Method in Treatment of Inguinal Hernia. Harry Lane.
73.—*Curability of Drug Cases. H. W. Coe.
74.— Primary Tonsillar Syphilis with Report of Case. H. C. Fenton.
75.— Fracture of Fibula, with Injury of Peroneal Nerve. J. F. Watt.
76.— New Emergency Hip Bandage. W. F. Amos.

Medical Fortnightly (St. Louis, Mo.), June 15.

77.—*Malarial Fever; Typhoid Fever of Long Duration; Subacute Miliary Tuberculosis. Francis Delafield.
78.— Hysteria Resulting from Severe Fright. F. X. Dercum.
79.—*Medical Inspection of School Children. Frank Hinckley.
80.— Treatment of Septic Conditions Following Labor, with Injection of Antistreptococcic Serum. A. G. Ellis.

Pediatrics (N. Y.), June 15.

81.—*Mastoid Complications of Exanthemata in Children. E. B. Dench.
82.—*Early Training of Blind Children. W. B. Drummond.
83.—*Case of Acetanilid Poisoning from External Absorption in an Infant. T. S. Westcott.
84.— Growth of Children in Germany. Arthur MacDonald.

American Practitioner and News (Louisville, Ky.), May 15.

85.—*Malignant Disease of Sigmoid. J. A. Ouchterlony.
86.—*Treatment of Diphtheria. Y. U. Moss.

Maryland Medical Journal, June 24.

87.—*Medicine in Nineteenth Century. S. C. Chew.
88.— Founders from Eastern Shore of Maryland. E. F. Cordell.
89.— Notes on Recent Scientific Literature. W. L. Howard.

Philadelphia Medical Journal, June 24.

90.—*Care of Delicate Children. Henry J. Mulford.
91.— Scientific Charity. Edward T. Devine.
92.— Some Infrequent Sequels of Typhoid Fever. E. M. Pressly.
93.—*Treatment of Stump in Abdominal Hysterectomy for Uterine Myomata. Byron Robinson.
94.—*Case of Diaphragmatic Hernia of Fourteen Years' Duration, Resulting in Marked Displacement of Organs. F. W. Flagge.
95.— Intubation in Diphtheria. Thomas W. Moore.
96.—*Acetanilid Habit. Amelia Weed Gilmore.
97.—*Syphilitic Perichondritis of Auricle. Francis H. Packard.

Medical Record (N. Y.), June 24.

98.— *Subacute Ataxic Paralysis and Combined Sclerosis—a Form of Spinal Disease Associated with Lethal Anemia and Toxemia. Charles L. Dana.
99.—*Miliary Tuberculosis of Pleura Without Other Tuberculous Involvement of Lung. Eugene Hodenpyl.
100.—*The Post-Febrile Insanities. Allen McLane Hamilton.
101.—*Fibroma of Abdominal Wall. C. Jeff. Miller.

New York Medical Journal, June 24.

102.—*Some Critical and Desultory Remarks on Recent Laryngologic and Rhinologic Literature. Jonathan Wright.
103.—*A Primary Polymorphous-Cell Sarcoma of the Nose, with Universal Metastasis and Formation of a Free Sarcomatous Mass in Right Ventricular Cavity. Alfred Scott Warthin.
104.—*How to Give Anesthetics. William S. Deutsch.
105.—*Inoculation Theory of Malaria. W. B. James.
106.—*Surgical Operations During Hypnotic Sleep. Arthur MacDonald.
107.—*Rubber Gloves in Aseptic Abdominal Surgery, with a New Method of Sterilization and Bacteriologic Provings. C. H. Richardson.

Medical News (N. Y.), June 24.

108.—*Fever in Aseptic Surgery. B. Farquhar Curtis.

Boston Medical and Surgical Journal, June 22.

109.— Experimental Research Indicating that Paraxanthin Poisoning is Not the Cause of Epilepsy or Migraine. James J. Putnam and Franz Pfaff.
110.—*Subsequent Histories of Arrested Cases of Phthisis Treated at the Sharon Sanitarium. V. Y. Bowditch.
111.— Care of Hysteria; Recovery after Prayer. S. G. Webber.

Cincinnati Lancet-Clinic, June 24.

112.—*Rupture of Choroid. Francis Dowling.
113.— Place and Work of the Medical Profession. Edmund Cone Brush.
114.— Two Deaths from Snake Bites. J. W. Compton.

Medical Review (St. Louis), June 24.

115.— Report on Progress of Gynecology. W. B. Dorsett.

AMERICAN.

1. Labor in Abnormal Pelves.—The summary of Davis' paper is as follows: 1. In 466 women examined by pelvimetry, 32 per cent. had abnormal pelves. 2. Among these, 20 per cent. required obstetric operations for safe delivery. 3. The mortality of the operations, which included the range of modern obstetric surgery, was *nil* from septic infection and hemorrhage. One patient died from nephritis. The fatal mortality of the operations, which included the range of one. 4. The writer's experience in the Cesarean section and symphyseotomies includes fourteen Cesarean sections and eight symphyseotomies. The mortality for the mother was *nil* where the patient was uninfected and sound before delivery. When death occurred in the mother it was from previously existing streptococcus and pneumococcus infection or from infection with bacillus coli communis before labor, or from eclampsia. In the fourteen Cesarean operations and eight symphyseotomies one child perished from inspiration pneumonia, its mother being infected before admission to the hospital. 5. In our experience celiohysterectomy with intrapelvic treatment of the stump, celiohysterectomy, symphyseotomy, forceps extraction in Walcher's position, version and embryotomy, in patients not infected before these operations were performed, have given excellent results.

2. See abstract in JOURNAL, May 27, p. 1173.

3. Postures in Labor.—Dickinson's paper is a study of the literature and facts as regards posture in midwifery, going back to the sixteenth and seventeenth centuries and bringing the subject down to recent times. His paper is illustrated by reproductions of ancient woodcuts and various diagrams from modern sources. His practical deductions are: 1. Posture will notably alter the shape of the pelvis in late pregnancy. 2. Increase in available room in the pelvic cavity as a whole cannot be brought about. 3. To obtain the largest conjugate at the inlet, the hanging dorsal posture is to be employed. The gain is nearly one centimeter. 4. To obtain the largest conjugate at the outlet, the full-flexed dorsal position is necessary. The increase promises to be from 1.5 to 2 cm.

4. Prophylaxis and Treatment of Puerperal Fever.—After a critical study of the literature, Moran concludes that the best practice is asepsis rather than antisepsis and that meddling examinations, douches, etc., are best avoided. The treatment should be based on a thorough physical and bacteriologic examination. If streptococcus infection exists, local treatment is likely to be beneficial. The surgical treatment depends on the case; of course, pus must be evacuated. In the general treatment, which embraces stimulants, strychnia, nitroglycerin to aid the heart, cold packs or sponging for fever, antipyretics are contraindicated as they depress the heart, and quinin is of little use except in malaria. Antistreptococcus serum has been advised of late and Moran reports three cases in which the improvement following was, he thinks, more than a mere coincidence.

5. Streptococcus in Gynecology.—In reviewing the Johns Hopkins Hospital gynecologic records from October, 1894, to June, 1896, and from October, 1897, to July, 1898, Miller found complete bacteriologic records in 127 inflammatory cases, in seven of which the streptococcus pyogenes was encountered. The histories are given. Miller finds this proportion agrees with that obtained from the literature, so that this infection may be reckoned as comparatively rare. Four of his cases were puerperal parametritis and one of the others was probably of puerperal origin. In no case of pyosalpinx proper was this germ found, and he thinks it must be rare in this condition. The origin is undoubtedly from a wound and generally from a puerperal one. In only two of his seven cases was it otherwise, once from the intestines and once probably through the vagina. The route may be either through the blood-vessels or the lymphatics, preferably the latter. The characteristic symptoms are soft, elastic swelling, becoming later of a bony hardness, with frequent pus accumulations, which may burrow in any direction. The mass is generally in intimate connection with the uterus, which it immobilizes. He thinks that the streptococcus may exist and be infective

in the organism for months, or even years. Only one of the seven cases was fatal; it was one of general streptococcus infection that succumbed under operation. The others were all discharged improved after three to eight weeks' treatment; 3 have since reported, 2 feel well, and 1 is worse. In 4 of the three discharged, the peritoneal cavity was invaded at the time of operation, but in only one did symptoms of peritonitis appear and in this they were only temporary. Miller thinks that the germs may have lost their virulence to some extent or the patients have become somewhat immune or both factors co-operated. As regards the operation, the exudate usually begins in the true pelvis and should when possible be reached through the vagina, avoiding invasion of the peritoneal cavity. When diagnosis is dubious, an exploratory laparotomy may be needed, and when it cannot be reached by the vagina, incision should be made where it lies in contact with the abdominal wall. Incision or puncture with free opening of the mass with the fingers or by blunt dissection with free drainage is always indicated. Excision of tubes, ovaries or uterus is rarely required. More harm than good is done by removal of the appendages in streptococcus parametritis.

6. Gonorrhea in Female.—Morse calls attention to the importance of this disorder and its frequency in women, which he thinks is greater than is commonly supposed. Married women are the usual innocent victims.

8. Intestinal Obstruction from Ascarides.—Taylor reports a case in which obstruction and intestinal inflammation requiring operation were caused by a mass of ascarides.

10. Progress in Medicine.—Osborne's paper is chiefly devoted to organotheraphy, which he discusses in detail.

11. Insanity, Its Medicolegal Relations.—Eliot notices the features of the Connecticut law in regard to the commitment of the insane, criticizing in some points and speaking well of it in others. He is rather biased, apparently, against the plea of insanity in criminal cases. He concludes that the appointment by judges of experts in insanity does not insure the selection of the most competent men, while the appointment of experts by opposed parties results in the most diverse opinions, and that when these opinions differ, neither judge nor jury appears to be much influenced by the testimony.

12. Hypertrophies of Pharyngeal Vault.—Munger counsels the early removal of adenoids and thinks that it would be a good plan to have systematic examination of children's throats for these growths, and regulations for their removal.

13. Doctor as Medical Jurist.—Bonestell speaks of the importance of the physician giving special attention to cases in view of medicolegal exigencies, and making thorough notes as to details.

14 and 15. Bronchopneumonia in Children.—Hodghead reports a case in a child of 18 months with bronchopneumonia in which, after failure of the routine treatment, complete change was made, poultices removed, water given instead of milk, 1-10 grain of calomel given every hour until the bowels moved freely, alternating every half hour with two drops of tincture of belladonna. In twelve hours every serious symptom had abated, the bowels moved freely several times, and in twenty-four hours the temperature had fallen to 100, the child was breathing 35 times to the minute, all rattling in the larger tubes had disappeared, pulse had become stronger, cough better, and the child slept and took nourishment. The belladonna was continued in drop doses every two or three hours until the characteristic eruption was produced, after which it was gradually withdrawn. Since this case he had relied on these two drugs and with them his mortality has not been over 5 per cent. in a disease which ordinarily has a mortality of 60 to 80 per cent. Coutts publishes experiences with belladonna in bronchopneumonia with children which correspond closely with those of Hodghead. He has given the extract of the old British pharmacopeia in doses of ¼ grain every three or four hours, without regard to the age of the patient. No disadvantage has been noticed except a slight delirium, easily controlled by lessening the dose, some flushing and rash.

18. The General Practitioner and the Insane.—Hall insists on the necessity of a thorough examination as to the condition and causes before sending patients to the asylum, and especially the condition as to the pelvic organs in females.

20. Cardiac Asthenia of Pneumonia.—Elsner remarks that the treatment of this condition has been very disappointing to the profession. The overwhelming toxemia has staggered our therapeutists and to meet it we must break away from the practices of the past. First, he protests against the indiscriminate use of those remedies which lower the vitality of the patients while they reduce the temperature, including under this head the coal-tar preparations. The indiscriminate use of nitroglycerin is also a growing error. It may have its use in overcoming peripheral obstructions such as we meet with in senile cases with sclerotic or narrow arteries, but his experience with it has been unfortunate. In pneumonia, where we already have paralysis of the vasomotors, it is a dangerous drug. Veratrum also comes under consideration. Bleeding the patient into his own veins is a dangerous teaching and he does not venture to say how many lives have been lost by the persistent use of this cardiac depressant. The two drugs on which he relies to meet the indication in pneumonia due to paralysis of the vasomotors are strychnia and digitalis, and with these he would administer the diffusible stimulants, and he believes in giving these at short intervals. He has treated cardiac asthenia by administering, every fifteen minutes, 15 drops each of compound spirits of ether, aromatic spirits of ammonia, compound spirits of lavender and tincture of valerian—keeping this up night and day until the pulse shows improved tone and the heart action is better. Valerian is given for its quieting effect, but, with some patients who cannot take it, he has substituted whisky or brandy in corresponding doses. With this he has insisted on the internal administration every two, three or four hours, according to the case, of ¼-gr. doses of spartein, with 4 to 6 gr. of caffein. Finally, the alcoholic stimulant on which he depends is Tokay wine, and he thinks that it has been of great value in tablespoonful doses every half hour, given with the ethereal stimulant. Occasionally he has found it necessary to use high rectal injections of coffee and whisky and hypodermic injections of ether and oil during the periods of collapse. As regards the use of oxygen, he is uncertain and seems doubtful as to its great benefit. Naturally, the treatment here indicated requires skilled and faithful nurses. (See JOURNAL, June 24, p. 1642.)

21. Laparotomy for Typhoid Perforation.—Taylor reports two cases of operation for typhoid perforation and discusses the condition, especially the question of the early diagnosis which is so important for the welfare of the patient. He believes that careful and repeated examinations of the blood will be a very valuable aid in diagnosis and may enable us to operate earlier than would otherwise be the case, as with the onset of any acute inflammatory process, as Cabot and Thayer have shown, the number of white corpuscles is suddenly and largely increased. The danger from operation in cases of a mistaken diagnosis is not, he thinks, so great as to prevent it in suspicious cases. He sums up the indications, quoting Finney's conclusions: "First of all, the so-called diagnostic signs of perforating typhoid ulcer, most reliance is to be placed upon the development of an attack of severe, continued abdominal pain, coupled with nausea and vomiting, and at the same time a marked increase in the number of white blood-corpuscles; secondly, the surgical is the only rational treatment for perforating typhoid ulcer; thirdly, there is no contraindication to the operation, surgically speaking, save a moribund condition of the patient."

22. Evolution of Modern Therapy.—Baruch's paper is an interesting sketch of the fashions and changes of therapy in the past, leading up to our present ideas. The paper is to be continued.

23. Kalt Suture in Cataract Extraction.—Risley reports three cases in which he employed the corneoscleral suture devised by Kalt, which he claims diminished the percentage of iris prolapse. Risley's experience would seem to be rather favorable.

25. See abstract in JOURNAL, April 15, paragraph 46, p. 839.

26. Published in JOURNAL, February 11, p. 296.

27. Ibid, April 15, p. 800.

29. Empyema of Gall-Bladder.—Summers reports two cases of gall-bladder empyema and discusses the condition. He sums up as follows: The chief symptoms leading to a diagnosis of empyema of the gall-bladder are: pain, and acute symptoms of inflammation in the gall-bladder region—muscular rigidity, pain on pressure, etc.—fever, chills, sweating; pressure of a tumor. Probably there will be a history of cholelithiasis. Suppurative inflammation of the right kidney and also of the vermiform appendix when displaced must be excluded. The treatment is surgical, and consists in incision and drainage of the gall-bladder. It is usually wise to aspirate the gall-bladder before incising it. It is not necessary, neither is it always practicable, to suture a gall-bladder into the abdominal wound. Gauze packing will often suffice to protect the abdominal cavity against contamination, before aspiration and incision, likewise after the establishment of drainage.

30. This address was published in the JOURNAL of June 10.

33. Burns and Scalds.—After general description of the varieties of these lesions, Leech reports a case in which a man was scalded very extensively over arms, legs and part of the

trunk and face, the injury ranging in the first and second degrees in severity. The man was put to bed and the wounds dressed with carron-oil and hypodermics given. After eight days, the hypodermics were withdrawn gradually and the local dressing changed to an ointment of iodoform, oil sassafras and vaselin. Supporting treatment continued throughout, consisting of sherry wine, whisky, brandy and egg-nog. Recovery was uneventful and he was dismissed in a little over a month after the injury. A notable incident of the case was the spontaneous combustion of the dressings during the first week.

34. Separation of Symphysis Pubis.—Rutherford reports a case of multipara, aged 28, who had had several difficult labors, and in whom the symphysis separated spontaneously during delivery. Recovery was long and tedious and complicated with septicemia in spite of precautions.

36. Puerperal Sepsis.—Garnett maintains that in spite of all that can be done it is not always possible to prevent puerperal sepsis and that its presence, even in this day of extreme modern antiseptics should not be taken as an evidence of criminal neglect, as some have advocated. In support of this view, he asks why there should be published a study of forty cases of puerperal sepsis in the John Hopkins Hospital, where every facility for its prevention must have existed.

37. Bronchopneumonia in Children.—Hough, after briefly describing the symptoms, mentions his treatment, which consists of stimulating expectorants, with ammonia preparations, counterirritation with mustard and camphorated oil, care to the kidneys, the use of quinin in combination with ammonia and digitalis. Aconite is an efficient remedy in the acute stage and he frequently resorts to the hot mustard bath in threatened collapse, and an emetic if mucous accumulations, which the patient cannot expectorate, exist. Good, intelligent nursing and feeding is, in his opinion, the great essential, and he places as much confidence in wise, motherly care as he does in medication.

39. See abstract in JOURNAL, March 25, p. 661.

41. Ibid. April 29, p. 937.

45. Diagnosis of Abdominal Contusions.—The importance of an early diagnosis of the ruptured solid or hollow viscera is the subject of Taylor's paper, and he reviews the various symptoms which may aid us. Shock, he thinks, has little diagnostic value, though it may be presented in such a way as to make its manifestation diagnostic. Prolonged shock points to visceral lesions. Abdominal distension is another symptom which is not uniformly characteristic. Abolished peristalsis, however, is especially valuable, being one of the earliest manifestations, and is appreciable at the right time. Muscular rigidity is next to abolished peristalsis, and he thinks it almost infallible. Pains, vomiting and facies are not unvarying signs, nor is the pulse. Senn's method of injecting hydrogen gas has not, he thinks, received the attention by surgeons that it ought. Percussion of the abdomen is not likely to furnish any valuable information.

47. Inversion of Uterus.—Coe reports a case of spontaneous inversion of the uterus occurring in labor after the use of ergot, which was reduced by laparotomy by Thomas' method.

49. Pulsating Pleurisy.—Henry reports a case of this condition and believes, contrary to some authorities, that the most important causes are a large effusion, relaxation of the thoracic wall, and a somewhat forcible heart beat. The presence of air in the chest may co-operate, but it is not essential. In the case he reports there were three strongly pulsating tumors, which is remarkable in its way.

51. Black Arts in Medicine.—This article discusses some of the unethical tricks adopted by some of the more unscrupulous members of the profession.

52. See abstract in JOURNAL, xxxi, Nov. 28, 1898, p. 1173.

54. N. Y. State Medical Society and the Code.—Richmond's article is a plea in behalf of the position taken by the New York State Medical Society, claiming that recognition of those that the law recognizes, provided they are up to the standard of professional gentlemen, should be the rule, and that we should rid ourselves of the title "regular" as egotistic and useless.

55. President's Address.—Kerr's address before the California State Medical Society takes up some of the questions of modern medicine in a very satisfactory way. It suggests an order of business for the more practical working of the society, alludes to the questions of vaccination, the ethical questions that arise, the crusade against tuberculosis, and asks the society to actively interest itself in these matters.

56. Diagnosis of Cerebrospinal Meningitis.—Cheney's article calls attention to the great number of deaths that have occurred in San Francisco within the last year as justifying the bringing forward of the subject, and calls attention to its diagnostic points, which are few. As regards symptoms, the best are the suddenness of the onset, the initial symptom usually being chill, severe headache, and vomiting. Headache, however, is the most constant phenomenon. The development is rapid, delirium usually comes on early, soon followed by coma and stupor. The third symptom, which is rather characteristic, is the rigidity of the muscles of the neck. These are all the points that are really characteristic of this very variable disorder. He then mentions the one diagnostic method which outweighs all that have been mentioned, namely, lumbar puncture, and describes the methods of operation and detection of the Weichselbaum meningococcus. One other procedure that is available is the blood count, one of the chief features of the disease being a high degree of leucocytosis. The absence of this symptom, therefore, would throw doubt on the diagnosis, while its presence would absolutely exclude typhoid fever, the disease most frequently confused with cerebrospinal meningitis. The last diagnostic method he mentions is the autopsy, which is of no benefit to the patient, but may be of great use to the physician in future experience. He reports three cases observed by him within the past three months. (See JOURNAL, May 13, p. 1052.)

57. Muscle Affections.—This is a clinical paper describing cases of rheumatic myalgia, rupture of triceps with complications, infectious neuromyositis, diffuse myositis, etc.

58. Why So Many Young People Wear Glasses.—Hulen, after noticing the common eye defects relieved by glasses, and stating that in many cases people are wearing glasses who do not need them, or such as they do not need, concludes: 1. That the eyes of children in the schools are more taxed than they formerly were and eye-strain brings out troubles which would have been unknown had the demands on the eyes been less. 2. Because of the defective lighting of large cities, which, with a less robust population, severely strains the optic apparatus. 3. Because physicians are beginning to notice defects and correct them. 4. Because with all of the above there are more inheriting optic weakness than was formerly the case.

59. See abstract in JOURNAL, May 6, p. 996.

60. Ibid.

61. Ibid.

63. See abstract in JOURNAL, April 22, paragraph 48, p. 894.

64. Tent Life for Invalids.—Gardiner calls attention to the great advantage to invalids and consumptives of open air living in a tent in the mountains of Colorado. The ranches seldom can give such accommodations as are required, but with a tent, and he describes his own, the occupant has everything in his own hands.

65. Peritoneal Adhesions.—In this short paper Robinson considers the condition of peritoneal adhesions, which produce one-third of all intestinal obstructions. Its results are: 1. Peritoneal bands. Peritoneal bands may cause intestinal obstructions by a segment of the bowels becoming strangulated by a band or thorough aperture. 2. By isolated peritoneal adhesions. 3. By Meckel's diverticulum and fixed appendicae epiploicae, omental cords, and acute kinking of the enteron loops. 4. Peritoneal bands may fix viscera. 5. They check peristalsis. 6. They cause pain by checking visceral function. Much of the immediate and remote pain subsequent to laparotomy is due to peritonitis and resultant peritoneal adhesions.

67. Ichthalbin in Pediatrics.—Homburger gives his experience with the use of ichthalbin in diseases of children. The doses he gives are from 1 to 2 grains to children under 6 months of age, three times a day; to children between 6 and 12 months, 2 to 3½ grains, and those from 1 to 2 years, 3½ to 5 grains. In older children, the dose may be still further increased. He says, in concluding his paper: "In finally summing up all the statements regarding the applicability of ichthalbin in pediatrics, it must, above all, be said that it is perfectly innocuous, and that, given in the form administered by us, it is an almost tasteless preparation which may be exhibited internally without any difficulty. It is able to change weeping eczemas into the dry form within a very few days, and this, too, in cases where external remedies alone were unable to effect the purpose. In combination with the remedies usually employed externally, it hastens the cure of dry eczemas. So also does it effect the recession of the multiple furuncles which frequently accompany the debilitating diseases of childhood. In wasting diseases, such as chronic pneumonia, scrofula, chronic intestinal catarrh, etc., ichthalbin effects an increase of the body weight, by increasing the appetite. Hence the remedy may be recommended particularly during the frequently debilitating antisyphilitic cures, as well as in convalescences frequently aggravated by anorexia and debility; and also other febrile diseases in children. Of the

intestinal catarrhs, the chronic are particularly influenced beneficially by ichthalbin, while the acute and subacute are less favorably modified. It is a valuable addition to our materia medica, and is well worthy of further consideration.

82. New Method in Inguinal Hernia.—Lane proposes a method, which he does not claim as new, because he believes it is being used by some practitioners of reputation in the east, of obliteration of inguinal hernia without a cutting operation. The treatment is made by the application of the positive pole of a galvanic battery through the borders of the internal ring, using a current of about 20 milliamperes. With the patient in a recumbent position, with hips elevated, a sharp-pointed, grooved director is introduced above the internal ring into the canal, using the forefinger of the left hand for a guide. When the director can be freely moved about in the canal, a long needle connected with a hypodermic syringe is introduced along its course well up to the internal ring and a 4 per cent. solution of eucain is slowly injected. After the parts are anesthetized, a platinum-pointed needle, insulated at its base, is introduced along the groove up to the internal ring, the forefinger of the left hand being used as a guide to keep back any intestine or omentum that may encroach, which, however, is unlikely. The director is then withdrawn, the needle being held in place against the upper segment of the internal ring and a light current from the positive pole of the galvanic battery is turned on and gradually increased until 20 milliamperes are used, then the point and face of the needle is passed over the surface of the ring, the cord always being held in safety under the forefinger. After going over all the surface of the ring except such portion as is occupied by the cord, the needle is withdrawn and the patient puts on a truss that has been worn if possible at least a month before the operation. The length of time which the current is used is usually about seven minutes. The usual immediate results are apparently a puckering and tightening of the internal ring and surrounding tissues. The treatment may be repeated in three or four days and sometimes a third and fourth one are given. After a time, varying from fifteen days to two months, the truss is removed and if the cure seems complete, no tumor protruding or pain or feeling of weakness felt, a recovery is pronounced. The operation is very slight, producing very little if any general disturbance. He reports a number of cases in which a cure was produced in this way.

73. Curability of Drug Cases.—Coe reports two cases of the opium habit and remarks on the same. He says there is no class of patients in which it is more difficult to foretell the outcome than these. A favorable case may lapse and often the most unfavorable will make a perfect and permanent recovery.

77. *Typhoid Fever.*—Delafield, in his clinic on typhoid, makes the following points: 1. If a proper case, do not continue tubbing too long—that is, after the third week. 2. If the disease is protracted over the fourth week, although the patient has typhoid fever, begin with scraped beef. This often makes a great difference in the heart's action. 3. When beyond the fourth week, look out for convalescence. Do not look at the temperature-chart at the head of the patient's bed, but look at the patient, who is the guide which tells you if he is convalescent or not. See if the tongue is moist and clearing off, and notice the expression of his face; see if he is sleeping at night and asking for food or getting hungry. The fourth week is the right time to look for convalescence. Do not be so stupid as to have a patient convalescent and not know it; that is a very dull thing to do; in order not to do it, look at your patient and not at the temperature-chart, for the patient is often convalescent with an afternoon fever; this fact is perfectly well known. Now the rule is to disregard the afternoon temperature and to go on increasing and varying the diet and get him out of bed. Dr. DaCosta was one of the first to call attention to the importance of getting patients out of bed when convalescent with afternoon fever.

79. Medical Inspection of School Children.—Hinchey pleads for a revision of the school courses of study so that study at home be not necessary, and for the appointment of medical inspectors of the school, whose duties shall be extended to examining every child asking for admission, the examination including the child's eyes and all mental and bodily defects so as to adapt the studies accordingly; also to include the examination of every child returning to school after illness, taking cultures from throats after recovering from diphtheria, and carefully investigating all cases of infectious disease.

81. Mastoid Complications in Children.—Dench discusses the subject of middle ear inflammation following the eruptive diseases, and insists on treatment of the mastoid if it has become involved. The incision through the soft parts is not sufficient even in very young children; he holds that the mastoid antrum should be entered in every instance. The operation can be performed in a few minutes and, if thorough aseptic precautions are taken, it is devoid of danger. He calls attention to the special points in the anatomy of infants and points out that it should be borne in mind that the tympanic ring is applied to the external surface of the temporal bone and that no osseous meatus exists. "The upper wall of the canal is attached to the squamous plate of the temporal bone and the lower wall of the canal lies in immediate contact with the upper wall. In order, therefore, to obtain a perfect view of the drum membrane in an infant, it is necessary to draw the auricle downward, backward and outward; in other words, to separate the inferior from the superior wall. In the operative technic this point must also be remembered. In infants, the surgeon is seldom called on to interfere before a postauricular abscess makes its appearance. When this abscess is evacuated, the surgeon should carefully follow the membranous meatus downward as far as the tympanic ring, exposing the posterior tympanic spine. If the cortex is perforated in this region, the mastoid antrum and middle ear will be easily entered. If, however, the line of superior auricular attachment is taken as a guide, there is great danger of entering the middle cranial fossa instead of the mastoid antrum. Particular stress should be laid on this point. As I have before stated, a post-auricular abscess in an infant is always so strongly indicative of inflammation in the mastoid antrum as to necessitate operative interference. While some cases recover after simple incision of the abscess, it is never wise to depend on this procedure."

82. Training of Blind Children.—Drummond noticed that blind children are often defective in other respects than vision on account of their having not been able to develop self-reliance, etc., on account of their disability. The proper method of training these cases can be expressed in a few words: They should be treated, as far as possible, exactly as if they were able to see. Bad habits should be carefully looked after and eradicated at the earliest possible date.

83. *Acetanilid Poisoning.*—Westcott reports a case where severe symptoms of acetanilid poisoning followed the dusting of the surface for intertrigo of the groins and thighs. The surface was comparatively small and he deduces that the use of acetanilid, even in insignificant exposures of the skin in young children, is distinctly dangerous to life.

85. Malignant Disease of Sigmoid.—Noticing the small amount of literature on the matter, Ouchterlony reviews the subject of sigmoid cancer, which generally appears in the form of scirrhus, encephaloid and colloid, very rarely as sarcoma. It seldom attains large dimensions and does not as a rule tend largely to invade other parts. It is rarely recognized in its beginning, and he describes the principal symptoms, which are not always localized, tumor, hemorrhage, discharge of pus, subnormal temperature, at least at times, and in his cases excessive dryness of the tongue and intense burning in the rectum. Complications were numerous, nephritis, peritonitis, abscess, obstruction, septicemia, etc. Diagnosis is not possible in the incipient stage and often difficult later. The course is more protracted than in other varieties. Surgery affords the only means of relief, though not of absolute cure, according to his observations. A case or two, however, have been reported which seem encouraging.

86. Treatment of Diphtheria.—Moss treats diphtheria as follows: Calomel in proportion to the age; tincture of chlorid of iron; three or four drops every four hours, and whisky, one or two tablespoonfuls every two or three hours; a general temperature, 65 or 70, and keeping the bowels open. Keep quinin out of the patient, washing and mopping the throat with a saturated solution of chlorid of potash every hour and a half or two hours during the day and less frequently during the night. The contact of the calomel with the diseased portion of the throat is beneficial and it should be given in such a way that this will occur. If there is much purulent discharge and sloughing, with bad breath, syringe the throat and nose with a 3 per cent. solution of peroxid of hydrogen every two to four hours. If laryngeal diphtheria occurs, keep the patient in a room at the temperature of 85 degrees, with moist air, and give eight to ten drops of fluid extract of jaborandi, 1 grain of muriate of ammonia, and 10 drops of glycerin every two or three hours. If signs of suffocation supervene, give an emetic, preferably ipecac. He mentions intubation as a last resort and briefly refers to antitoxin without details.

87. See abstract in JOURNAL, May 6, p. 999.

90. *Care of Delicate Children.*—In a group of cases presented by Mulford, the cause of the condition is considered to be either an autointoxication, or the existence of what are commonly termed "adenoid vegetations." Autotoxis is considered by far the most frequent cause; although these two conditions frequently co-exist they may be quite independent of each other.

When, however, the adenoid vegetations exist to the extent of obstructing respiration, autointoxication is present to a certain extent, dependent perhaps on faulty oxidation. In treating such cases all respiratory obstructions are to be removed. Drugs are very sparingly used, even laxatives are but cautiously resorted to; intestinal lavage is much to be preferred. Much may be done by instructing the parents, in guiding their children in the formation of correct habits of life. The main things to be taught are to eat properly, to play, and to rest properly, and to give proper attention to the action of the bladder and bowels.

93. *Stump in Abdominal Hysterectomy.*—Robinson, after making a median incision with catgut, beginning at the angle of the wound above the umbilicus, closes the peritoneum down to the posterior surface of the uterus, thus closing the peritoneal cavity. The ovarian arteries are ligated with catgut, close to the uterus, a large clamp is placed on the uterine side of the broad ligaments on each side of the uterus, as far down as is wished to begin to make the peritoneal cuff. The ovaries are left, and as much of the uterine ends of the oviducts as possible, to keep the nerves of ovaries, ligaments, and tubes intact, to avoid precipitate menopause. He splits the broad ligament down to the uterine arteries and ligates. The peritoneal cuff is now stripped, making it as ample as possible. The uterus is amputated just above the internal os. The upper edge of the peritoneal cuff is sutured to the parietal peritoneal edge, which is produced by the median incision, and the peritoneum is entirely closed immediately after making the cuff if desired. The uterine stump, closed to a cone by catgut, is drawn into and fixed in the abdominal wound. The abdominal wall is then closed. The two sutures of the wound over the stump are allowed to remain united for thirty-six or forty-eight hours to allow escape of wound secretion. Advantages claimed are that immediate closure of the peritoneal cavity avoids shock to a great extent. Intraperitoneal hemorrhage is impossible, as all arterial ligatures are extraperitoneal.

94. *Diaphragmatic Hernia.*—The condition resulted from a fall in infancy and during the following years, aside from a persistent hacking cough, stooping attitude, and paroxysms of abdominal pain, no great inconvenience was experienced until after the eighteenth year, when death resulted from intestinal strangulation. Post-mortem, it was found that an opening 3½ inches in its longest diameter existed behind the external tendinous arch of the left side of the diaphragm; the entire small intestine was found in the thorax together with appendix and caput coli. The stomach was displaced to the right and the liver displaced until it extended one inch below the umbilicus. The spleen was located on the upper surface of the diaphragm and below the heart. The intestines were discolored and showed signs of inflammation. The left lung was entirely collapsed and carnified.

96. *Acetanilid Habit.*—Gilmore's case, during a period of twenty months, used from 5 to 10 grains of the drug daily, with complete satisfaction and no marked desire for an increased quantity although resisting all efforts at diminution or substitution. The case was suffering from a carcinoma of the uterus.

97. *Syphilitic Perichondritis.*—Packard reports a case of perichondritis undoubtedly syphilitic in its nature, appearing twelve years after the initial chancre. The upper portion of the auricle, the helix, and antihelix were greatly infiltrated and exceedingly tender. The diagnosis was made from the history of primary and secondary signs of syphilis, the ready response to antisyphilitic treatment and the absence of any evidence of traumatism.

98. *Paralysis and Combined Sclerosis.*—This paper is fully illustrated by figures showing the changes in the spinal cord in those cases of spinal cord disease to which he gives the name of subacute spinal paralysis. They are characterized by symptoms of numbness, ataxia and paralysis involving the legs and then the arms, progressing at first slowly, and then rapidly and running their course in one or two years. The cause is unknown but is undoubtedly some form of toxemia. It is more often associated with pernicious or profound secondary anemia than with any other conditions, and is seen after severe malarial and lead intoxication. It occurs usually in middle life or later and more often in women. It resembles light grades of multiple neuritis, such as are due to arsenic or diabetes; on the other hand it somewhat resembles locomotor ataxia in its earlier stages. It is to be recognized mainly by the presence of anemia or cachexia, the age of the patient, the progressive and rather rapid character of the symptoms, absence of much pain or tenderness over the nerves, the absence of eye symptoms and of the visceral symptoms of locomotor ataxia. The pathologic anatomy consists in a progressive degeneration involving most the posterior columns, and to less extent the lateral columns of the spinal cord, and later the gray matter and other parts of the white matter. At the beginning the disease is systematic, affecting, however, the cervicodorsal part of the cord more severely, as a rule, but usually developing two or three specially marked foci of degeneration lower down in the cord. Pronounced changes in the blood-vessels sometimes accompany the degeneration, which is noninflammatory and often ends in softening. The treatment of the disease is always ineffective in the later stages. In the earlier stage the trouble may be helped by the use of arsenic, quinin, tonics, proper feeding, and the use of saline injections.

99. *Miliary Tuberculosis of Pleura.*—Hodenpyl describes and illustrates miliary tubercular infection without involvment of the lungs. He concludes that it is of frequent occurrence and that miliary tubercles in the pleura may apparently assume unusual significance either in causing, in susceptible individuals, or under otherwise favorable conditions, a generalized tuberculous exudative pleurisy; or by complicating through concurrent infection, an acute exudative pleurisy of independent origin. Miliary tubercles in this situation are prone to become fibrous.

100. *Post-Febrile Insanity.*—Hamilton's paper is a general description of certain types of insanity following infectious fevers, especially typhoid and influenza.

101. *Fibroma of Abdominal Wall.*—Miller describes three cases of the rather rare growth of fibroma of the abdominal wall and discusses the condition.

102. *Tuberculosis.*—In this review of recent literature, Wright first notices certain commercial tendencies as shown in incidents of the manufacture of diphtheria and tuberculous antitoxin, and then alludes to the various cures of consumption which he finds are not especially supported by facts, at least as far as the serum therapy is concerned. He next remarks on the question of the infection of milk and milk products and rather throws doubt on the special dangers announced from this source. He also remarks on the possibility of the infection by tuberculosis from dust and coughing, and ridicules Frankel's appliance for filtering the expired air of consumptives. The behavior of the larynx toward tubercle infection is next reviewed, and he thinks that the statistics, especially those of Kreig, are hard to explain except on the theory that the infection has reached the larynx through the lymph channels and not through the atmosphere. In fact, he rather doubts the infection of the lungs directly through inspiration of the germ, and believes that the tubercle bacillus enters the organism in a large number if not in the majority of cases in other ways than through the lungs or stomach. It is shown by post-mortems that other localities which are closed to clinical investigation are just as apt to be the seats of tuberculous disease as are those that are open and exposed. He next notices the symptoms of pulmonary hemorrhage as an indication of tuberculosis, and refers to the comparatively recent work of Massei, which describes a type of tracheal mucous disorder, giving rise to hemorrhage without tubercular infection, and insists on the importance of the examination of the sputum, which he thinks, is not sufficiently attended to even yet. He remarks on the possibility of mistaking syphilitic laryngeal infection for tuberculosis, and notices a recently reported case of Trifelletti as illustrating this fact. In conclusion he refers to the paper of Hansemann on the secondary tubercular infection, which he thinks goes rather too far in its opposition to the higher contagion views. The paper is a conservative one but judicial in its tone.

103. *Sarcoma of Nose.*—Warthin reports an interesting case of polymorphous-cell sarcoma of the nose, and calls attention to its very excessive malignancy and its adding a new form to the sarcomata found in this region. He appends a bibliography.

104. *How to Give Anesthetics.*—Deutsch calls attention to the importance of a thorough knowledge of the patient by the anesthetist, especially the temperament, habits as to stimulants, and condition of the respiratory and circulatory organs. He thinks the Allis inhaler the best and pleasantest apparatus. He finds the pupilary reflexes a satisfactory guide to the degree of narcosis, and believes that anesthesia should be carried simply to the point where it will allow the surgeon to do thorough work and permit a quick return to consciousness.

105. *Inoculation Theory of Malaria.*—James goes over the facts as regards the mosquito theory of inoculation and believes that, this being proven will render the chances for prevention much more hopeful than was formerly the case, as proper drainage, etc., would render a mosquito-infected region much less dangerous than was previously the case.

106. *Surgery During Hypnosis.*—McDonald reports two cases observed by him, operated by Dr. Schmeltz of Nice, one of am-

putation of the breast and one of ectropion of the lower left eyelid. The patient, in a state of somnambulism, followed the directions of the doctor and apparently did not experience the slightest pain.

107. *Rubber Gloves in Surgery.*—Richardson believes that rubber gloves afford the best method, while at the same time, as a precaution against accident, a thorough sterilization of the hands and arms should also be practiced. He prepares the gloves by first washing them in a soda solution, inside and out, and drying over a heater or gas flame. The inside should be dusted with a dry heat sterilized soapstone. Each pair should be wrapped in a double layer of gauze and placed in a formic aldehyde sterilizer for two hours, then wrapped in a towel already at hand and sizes marked with graphite.

108. *Fever in Aseptic Surgery.*—Curtis treats of the causes and diagnosis of fever occurring in surgery with primary union of the wounds, and illustrates it with temperature curves. In a certain proportion of these cases some slight infection may be credited as the cause of the fever, but this cannot be said to be the case in all, as such fever occurs after simple fractures and subcutaneous injuries where infection is out of the question, unless it occurs through the blood. He insists on the importance of examination of the blood for leucocytosis, Widal's reaction, material germs, etc. A large proportion of cases are undoubtedly due to absorption of toxic matter in the course of healing, though there are a certain proportion that may be credited to shock. In the diagnosis of aseptic fever, however, it can be distinguished from shock by the good quality of the pulse and we can readily exclude other varieties of absorption fever (toxins, bile, thyroid juice), by the history of the case. We can distinguish it from inflammatory fever by its early appearance, by the fact that the pulse remains relatively low, and the patient has few subjective sensations other than a little thirst and flushing. The character of the pulse as well as its rate is of importance, as in aseptic cases it remains quite soft. The pulse will probably be the best guide in doubtful cases. The fall of aseptic fever is not so characteristic. It may reappear in two or three days or the temperature may continue a little above normal for weeks. He alludes, however, to the fact that there are many mixed cases as in case of toxins from sterile pus in the tubes, as in pyosalpinx or severe shock.

110. *Sanitarium Treatment of Phthisis.*—Bowditch reports the results of thirty-six cases that have been treated and discharged as arrested cases from the Sharon Sanitarium from February, 1891 to September, 1898. Excluding two cases that were there only a short time and have been discharged but a little while, there were 34 cases; 6 of these died after various periods, mostly on account of unhealthy surroundings or occupations; 1 has not been heard from recently; 24 are living, apparently well, and in active work; 3 have had slight return of their former symptoms but are still active and apparently doing well. He gives the history of the diseased cases, showing the apparent or probable cause of death. In every case efforts were made to keep the patients from returning to the same conditions as those in which the disease had developed. This is not always easy. The treatment generally was insistence on fresh air, judicious exercise and good healthy food, medicine being used rather sparingly and as an adjunct to general treatment. The reports are of interest as showing that phthisis can be arrested by treatment in a sanitarium not especially favored by climatic conditions and near a large city. This being the case, the possibilities of the cure of consumptives are greatly increased.

112.—See abstract in JOURNAL, May 20, p. 1116.

FOREIGN.

British Medical Journal, June 10.

Misplaced Testes and Their Surgical Treatment. H. BERTRAM ROBINSON.—The author describes the different forms of ectopia and retentio testis. Of the former the perineal type is the most common. He reports four cases, in two of which he operated by dissecting the testis free and pulling it down into the scrotum through the bottom. The crural form is rare. If he had such a case he would operate by bringing the gland into its proper place through the floor of the inguinal canal, not hesitating to cut Poupart's ligament and re-suture it afterward. The pubopenile form is very rare. The testis here is alongside of the root of the penis. It is said to be due to great development of the inner attachment of the gubernaculum. In the abdominal form the testis is out of position by passing upward outside of the external oblique above the external ring into the peritoneal sac similarly placed. It has been attributed to the action of a truss on an undescended testis, but Robinson can quote cases where this factor was lacking. He reports two cases, one operated on on both sides, the testicles being brought down into the scrotum. Four forms of the retentio testis are recognized, the abdominolumbar, where it does not descend at all; the iliac, where the testicle is in close relation with the internal ring resting on the psoas; the inguinal, where it occupies any portion of the canal, including the interstitial variety, where the sac extends between the structures of the abdominal wall; and the cruroscrotal, where it stops just outside the external ring over the pubic crest, requiring careful diagnosis from the pubopenile and higher perineal ectopic forms. In all but the last of these, when complicated with hernia, the operation of castration is advisable, but if the testis is outside the ring, attempts may be made to carry it down to the proper location. In this case the lower part of the gland should be attached to the perineum behind the scrotum to prevent retraction, and the cord may likewise be fixed to the pillars of the ring for the same purpose.

Ameba Dysenteriae: Relation to Tropic Abscess of Liver. D. G. MARSHALL.—This is the report of a case of recurrent liver abscess, coming on after return to the tropics, in which death was caused by a thrombus containing large numbers of the amebae, a hitherto undescribed pathologic condition. Illustrations of microscopic sections showing the conditions are given. The author emphasizes the danger of recurrence and of the too early return to the tropics—within two years—after the abscess has been cured.

Removal of Fibroid from Uterus Unicornis in Parous Subject. ALBAN DORAN.—In this case there was a myoma of a rudimentary horn connected by an impervious band with a well-developed side. The woman had twice been pregnant, once carrying the child to term. The operation left the developed side intact. The author finds the condition a very rare one, the only one reported precisely like this being one of Dr. Armand Routh's.

Lancet, June 10.

Fragments of Pathology and Therapeutics. W. HOWSHIP DICKINSON.—The Baillie lecture of Dr. Dickinson has for its subject cardiac dilatation, especially in relation to valvular lesions. He describes the mechanism of the production of this condition and sums up as follows: "Both dilatation and hypertrophy are brought about by intracardiac pressure, which is either absolutely increased or is greater than the means of resistance. Commonly these two results are associated, though the proportions vary. Hypertrophy is apt to prevail when there is undue retention of the blood during systole, dilatation when there is undue intrusion of the blood during diastole. Hypertrophy is the more apparent when the exit of the blood is impeded, dilatation when the entrance of the blood is increased. The one affects the heart in systole, the other diastole. The origin of dilatation in distension during diastole, though not the only mode of its production, may perhaps be regarded as the chief and as one to which attention needs to be emphatically called.

Effect of Baths, Massage and Exercise on Blood Pressure. WILFRID EDGECOMBE and WILLIAM BAIN.—The following is the summary of the experimental study of Edgecombe and Bain: 1. Cold baths raise the arterial pressure, maximum and mean, and lower the venous pressure; after reaction the arterial pressure falls and the venous pressure rises. 2. Percussion added to cold increases the rise in arterial pressure. 3. Warm baths of plain water lower the arterial pressures and both absolutely and relatively lower the venous pressure. 4. Turkish baths lower the arterial and venous pressures to a greater extent, though the fall in venous pressure is proportionately not so great as that in arterial pressure. 5. Saline baths at warm temperatures lower the arterial pressure to a greater extent than plain water baths at the same temperatures: the venous pressure, though absolutely lowered, is relatively raised; where the amount of saline material in solution is considerable, a further lowering of arterial pressure takes place, while the venous pressure becomes absolutely raised. 6. Dry massage lowers the arterial pressure and relatively or absolutely raises the venous pressure, provided the abdomen be not massaged too vigorously; when this is done a rise in all pressures occurs. 7. Warm temperature plus massage, as in the Aix douche, has a more powerful effect in the same direction than dry massage alone. The effect of a series of Aix douches is cumulative. 8. The effect of exercise on the blood pressure depends on the severity of the exertion. In all forms an initial rise in arterial pressure occurs; if the exercise be mild, a fall occurs during its continuance; if severe, the rise is mantained; after exercise, moderate or severe, a fall taks place. The venous pressure is raised during all forms of exercise and remains raised during the subsequent arterial fall. The return to normal after exercise takes place more or less rapidly, according to the gentleness or severity of the exercise and the temperature of the atmosphere.

Systematic Muscular Development as a Radical Cure of Hernia. A. A. WARDEN.—The principal point in this paper is the value and importance of systematic muscular exercise as a substitute for operation in hernia, especially in the young. The author has followed a number of cases in which great benefit occurred by strengthening the abdominal muscles in this way, and he claims that gymnasts and athletes generally show a much more firm and smaller internal ring than do ordinary individuals. He suggests the following exercises as among the best for patients to take: 1. The patient, with his hands at his side, raises himself from the dorsal decubitus to a sitting posture twenty or thirty times, twice or oftener each day. 2. Similarly, from the horizontal position, let both legs be raised from the ground almost to a perpendicular; this also twenty or thirty times till there is distinct fatigue. 3. Modify the first of these three exercises by raising the body sidewise in a rotary movement, and thus exercise the obliques. Similar modification may be introduced by extending the arms during the movements, by the use of dumb-bells or exercisers, and so on.

Revista Med. de Chile (Santiago), March.

Toxic Action of Benzene and Some of Its Derivatives. A. L. SILVA. The kidney and the liver are the organs studied in this connection, and a diffuse inflammation found to be the type of the lesions produced by benzene, phenol, nitrobenzene and anilin, which affect the kidney and liver as a protoplasmic poison, attacking the tissues directly, or disturbing by the same mechanism the centers regulating the circulation or destroying the vital elements in the blood.

Bulletin de la Societe Medicale des Hopitaux (Paris), June 1.

Linear Scarifications in Treatment of Ulcerations of Cervix Uteri. A. SIREDEY.—The cervix is drawn out and scarified with fine strokes, as close together and deep as possible and crossed, similar to the dermatologic treatment of acne, etc. No pain is experienced and the blood that issues from the scarifications is never important, not requiring hemostasis. Four or five seances are usually necessary to scarify every scrap of the diseased or ectopic tissue and evacuate any cysts that may be found. The results are highly satisfactory, and the cysts do not recur.

Journal des Sciences Medicales de Lille, May 20.

Surgical Treatment of Female Incontinence of Urine. H. FLOUQUET.—The aim of Fischer's operation for essential incontinence of urine in women is to sever the nerves connecting the urethra or bladder or both with the genital organs, and other methods of intervention have only succeeded when this was unconsciously accomplished. A small, long flap a centimeter in width is cut out of the tissue of the vaginal mucosa each side of the urinary meatus after two vertical incisions, leaving the urinary meatus and the lower end of the urethra untouched. The raw edges are left to cicatrize separately, with a strip of gauze between, although each of the lips is sutured with fine silk. This "lateral and inferior liberation of the meatus" includes the resection of any adherences or bridles binding down the meatus, and will be found successful in all forms of incontinence of urine in females.

Revue Generale d' Ophthalmologie (Paris), May 30.

Prophylaxis of Expulsive Hemorrhage After Removal of a Cataract. PEIRONE.—Two observations are reported of this complication, both in persons about 74 years of age, both affected with pronounced arteriosclerosis. In one the hemorrhage occurred at once and the entire contents of the eyeball were expelled, which was prevented in the other by introducing the scissors into the hernia of the vitreous body, beneath which a mass of blood could be seen, and cutting down to this mass, thus allowing the blood to escape freely. There was slow, persistent hemorrhage for six days, and later hyphemia, iritis and a pupillary exudation, but the perception of light was retained, and sight seems to be gradually improving. To avoid a similar complication when removing the cataract from the other eye in these two cases, Peschel made a wide discission in the shape of a letter N, not allowing any aqueous humor to escape. Four to seven days later he did a small vertical linear keratotomy in the temporal half of the cornea, crossing the membrane rather obliquely, and then by slight pressure expelling the softened remnants of the lens, completing the evacuation with a Daviel curette; scopolamin and dressing. In the second case he reopened the wound in the cornea in five days to remove the last scraps of the lens. Recovery was normal in the first, vision 10-20. There was slight hyphemia and irritation in the other case, and vision 10-40.

Centralblatt f. Chirurgie (Leipsic), June 3.

Simple Method of Trephining for Intracerebral Injections. A. KOCHER.—This communication is not a plea for these injections, but merely an announcement that the technic is absolutely simple and harmless and requires no special skill on the part of the general practitioner. After a subcutaneous injection of 1 per cent. solution of cocain, the skull is bored through with a small drill held perpendicularly, the drill withdrawn and the syringe needle inserted in its place into the brain matter. The spot best adapted is 2.5 to 3 cm. laterally from the bregma, in front of the precentral sulcus, on a level with the sulcus between the middle and superior convolutions. This spot allows the passage into the ventricle without injury to the motor centers. Four cases of tetanus observed recently at the hospital (Berne) were all treated with these intracerebral injections of tetanus antitoxin and all recovered.

Deutsche Medicinische Wochenschrift (Berlin), June 1 and 8.

New Modification of Suspension Treatment for Nervous Troubles. S. H. SCHEIBER.—The inconvenience that the weight of the limbs is unnecessarily added to the weight of the suspended spinal portion of the body, and several other inconveniences of the usual methods, are obviated by this modification, which suspends the patient seated. A large pulley wheel is mounted on top of a solid post, and a rope passes over it, from one end of which the subject is suspended by means of weights on the other end of the rope. The subject sits on a chair or seat projecting from the post, and is suspended by the head and elbows. Bearing down on the elbows relieves the pressure on the head, and the weights can be graduated to suit individual cases.

Restoration of Function of Arm in Case of Paralysis of Deltoid Muscle. M. ROTHMANN.—By means of daily passive movements of the arm, galvanization and practicing the other muscles of the shoulder, Rothmann succeeded in restoring satisfactory function in an arm paralyzed after acute articular rheumatism, notwithstanding the persisting paralysis of the deltoid.

Injections of Toxin into Brain. J. BRUNO.—Injected directly into the brain, the effect of morphin, for instance, is not at all the usual picture of intoxication with this alkaloid, but violent clonic and tonic spasms are produced, showing a local irritation of the subcortical centers known to be the spasm centers in the rabbit. A very much smaller amount will produce intoxication by this method, and experiments with sodium ferrocyanid and methylene blue demonstrate that the fluid injected makes its way through the lymph-passages into the ventricles and thus produces the direct local irritation of the subcortial centers. Intoxication follows the injection of any substance that chemically aects the protoplasma of the brain cells; ferrocyanid, for instance, harmless injected into the general circulation, produces violent intoxication by this route, but indifferent substances, such as sugar, urea, salt and Glauber's salts, produce no reaction. It is evident that it is impossible to draw any conclusions in regard to the general effect of a substance circulating in the blood from the effect of these local cerebral injections.

Muenchener Medicinische Wochenschrift, June 6.

Accidents After Manipulative Reposition. H. KAPOSI.—Pays reported last year a case of fatal fatty embolism after "brisement force" on account of ankylosis of the knee-joint, and five somewhat similar cases are on record. Czerny recently undertook to correct a flatfoot by manipulations without force, under ether, and the application of a plaster cast. The foot seemed perfectly healthy, but an acute osteomyelitis developed, with complete necrosis of the cuboid, threatening amputation, and leaving the foot in a much worse condition than before, the patient a boy of 15, not very strong, but of healthy parents. He also reports a second case of accident: a young woman, whose clubfoot he corrected by manipulations and section of Achilles' tendon and plantar fascia. The nervus plantaris must have been unduly stretched, however, as a neuritis developed, causing insomnia, general nervousness, pain and lack of appetite, lasting for six months.

Wiener Klinische Rundschau, June 4.

New Method of Determining Amount of Urea in Urine. E. FREUND and G. TOEPFER.—Equal parts of normal concentrated urine and 95 per cent. alcohol (5 c.c.) are evaporated to dryness on the water-bath, extracted with absolute alcohol and filtered, the alcohol then evaporated to a mere trace and about 70 c.c. of a saturated ethereal solution of oxalic acid poured over and left to settle. The ethereal solution is then carefully poured off over a filter, leaving the residue in the filter, in which it can be washed in several portions with 60 to 80 c.c. of ether. When the filter is dry the contents are washed and titrated with two drops of a 1 per cent. solution of phenol phthalein until decidedly red, and then the nitrogen determined by Kjeldahl's method: 1 c.c. ¼ normal solution of sodium solution corresponds to 0.015 gram of urea. Al-

bumin or sugar in the urine does not affect the accuracy of the test.

Wiener Klinische Wochenschrift, June 1.

Dangers of Application of Murphy Button. R. PORGES.—In the course of an operation for carcinoma, involving the pylorus and transverse colon, the Murphy button was applied to the colon, at a point exactly over the spine. The patient complained of a sensation as if a stone were resting heavily where the tumor had been, and, later, symptoms of occlusion developed, terminating fatally. At the autopsy the anastomosis was found perfect, but the duodenum was compressed and its lumen closed between the Murphy button and the spine. The enforced rest in bed and compressing bandage had contributed to this effect, which could easily have been avoided if such an experience had ever been recorded before as a warning.

Gaceta Medica (Mexico), May 15.

Bacteriologic Study of Yellow Fever. A. MATIENZO.—The conclusions of this study of a number of cases of unmistakable yellow fever observed at Tampico are that none of the microbes discovered to date are the specific agent of yellow fever, posure to 15 degrees C. below zero fails to affect its virulence and development, and other characteristics proclaim its kinship with the coli bacillus and Eberth's bacillus. Sanarelli himself states that it is impossible to isolate it in more than 58 per cent. of the cases. Matienzo believes that the true agent is an infinitesimal organism, impossible to discover with our present means of research, "smaller than the infinitely small," as is probably also the case with hydrophobia, smallpox and measles.

Nord Medical (Lille), June 1.

Thyroid Treatment to Accelerate Consolidation of Fractures. LAMBRET.—The JOURNAL has called attention to the success obtained in several cases of tardy consolidation by administering thyroid extract, and this effect has been confirmed by later experiences related in the *Brazil Medico* and other exchanges. Lambret now announces that he administers thyroid extract in appropriate cases from the beginning, and finds consolidation wonderfully accelerated. He describes one case in particular, a fractured limb; the patient was walking on it the seventeenth day. Sixty centigrams of thyroidin were administered every day.

Lyetop. Russkoi Chirurgii, No. 1.

Surgery of Lung and Diagnosis of Pleural Adherences. K. SSAPESHKO.—The writer has been remarkably successful in his interventions on the lungs for cavities, gangrene, abscesses, etc., restricting operation to regions he knew to be surrounded by preexisting adherences, only requiring strengthening with a few stitches. He diagnoses pleural adhesions and defines their limits by means of a blunt, hollow, eyeless needle with one opening in the side 1 to 2 mm from the tip. The other end is connected by a rubber tube with a two-branched glass tube which serves as a manometer. The blunt tip of the needle is inserted through a small incision in the skin and slowly pushed through the musculature and into the pleura costalis, when it makes a peculiar sound. Pushing it still farther, if the pleura is free from adherences, the needle pushes up the lung, and as soon as the opening in the needle enters the pleural cavity, the fluid is aspirated into the needle by the negative pressure in the cavity, and the fluid in the manometer rises. If the fluid remains unvaried, this is evidence that there is no pleural cavity at this point, and that the walls are adherent. This test has been frequently applied and has never failed. Ssapeshko has also succeeded in producing adherences artificially—dogs—by injecting one gram of a 5 per cent. solution of formalin, or 10 to 20 per cent of potassium, or 10 per cent. of nitrate of silver. He is confident that adherences could also be produced in the human pleura in five to seven days by injecting five or six drops of a 1 to 2 per cent. solution of formalin with the needle above described, after injecting five to ten drops of a 5 per cent. solution of cocain.

Plastic Restoration of Urethra with Continence. G. D. ROMM.—He reports a new plastic urethra made in a case in which the urethra had been completely destroyed. It was then twisted as Gersuny suggests for the rectum, in two sittings, 180 degrees each time. The patient has complete control of the emission of urine, even when the bladder is full, except when she reclines on the left side.

St. Petersburg Medicinische Wochenschrift, May 27.

Treatment of Syphilis with Specific Serum. A. VYEVIOROVSKI.—Sixteen patients with fresh syphilis injected with serum from others in the late condylomatous and tertiary stages, were very much improved and all manifestations disappeared. The effect on the blood was especially marked: the amount of hemoglobin, the number of red corpuscles and the morphologic metamorphosis of the white corpuscles all very much increased. This effect on the blood is specific, as control tests with normal serum were entirely negative. In one case, completely freed from all syphilitic manifestations by the serum treatment, January, 1896, there has been no recurrence.

Torsion of Cecum. E. CANDAU.—The writer adds another to the twenty-five cases on record in which the cecum was twisted on its axis, closing the lumen. The thirteen unoperated cases all died, and in this case there were evidences of commencing peritonitis when the laparotomy was done, fifty-four hours after the patient felt "something go wrong" when lifting a heavy weight after a hearty meal. The cecum was merely straightened and replaced.

Societies.

International Conference for Regulation of Introduction of Spirits into Africa.—This conference, which recently met at Brussels, with twelve powers represented, passed resolutions to have the import duties on spirits very much increased, according to *Sem. Med.*, June 14.

Indian Territory Medical Association.—At the annual meeting of this Association, held at South McAlester, June 20-21, the following officers were elected for the ensuing year: president, G. A McBride, Ft. Gibson; first vice-president, F. S. Clinton, Luka; second vice-president, W. O. Shannon, Durant; secretary and treasurer, LeRoy Long, Caddo. The next meeting is to be held at Wagoner in December next.

Seventh Russian Medical Congress.—One of the most interesting communications presented at this successful Congress, at Kazan in May, was the report of E. Assendelft, a general practitioner in a remote corner of Russia, who has kept up with the achievements of modern surgery in his isolation, and reported 669 operations for calculi with a mortality of only 2 per cent., and no deaths in a series of 100 cases of sectio alta, out of a total of 400.

Delaware State Medical Society.—The 110th annual meeting of this Society convened in Wilmington, June 13, the address of welcome being made by Dr. Henry R. Spruance. The election of officers resulted in: president, O. D. Robinson, Georgetown; first vice president, William H. Hancker, Farnhurst; second vice president, John W. Clifton, Clayton; secretary, John Palmer, Jr., Wilmington; assistant secretary, William P. Orr, Lewes. The next meeting will be held in Rehoboth.

Tri-State Medical Association.—This Association, embracing members from Maryland, Pennsylvania and West Virginia, elected the following officers at the close of a two-days session at Markleton Sanitarium, Pa., June 22: president, J. M. Spear, Cumberland; vice presidents, Americus Enfield, Bedford, Pa., R. Gerstelle, Elk Garden, West Va., and W. J. Craigin, Cumberland; recording secretary, Percival W. Lantz, Alaska, West Va.; corresponding secretary, F. W. Fachtman, Cumberland; treasurer, H. W. Hodgson, Cumberland.

South Dakota Medical Society.—At the recent meeting of this society, held in Yankton, S. D., the following officers were elected: president, D. W. Rudgers, Yankton; first vice president, T. F. Beveredge, Bridgewater; second vice-president, C. M. Keeling, Springfield; secretary and treasurer, W. J. Maytum, Alexandria; assistant secretary, L. F. Diefendorf, Aberdeen. In a discussion of a new medical law, one similar to the present Alabama law was favored and funds were appropriated for having such a law drafted, while every effort will be made to secure its passage by the next legislature, January, 1901.

American Neurological Association.—This Association, at the annual meeting, held in Atlantic City, N. J., recently, elected officers as follows: president, E. D. Fisher, New York; first vice president, Morton Prince, Boston; second vice-president,

James W. Putnam, Buffalo, N. Y.; secretary and treasurer, Graeme M. Hammond, New York; councilors, James Hendrie Lloyd, Philadelphia, and Joseph Collins, New York; honorary member, Dr. Robert T. Edes, Boston. The next meeting will be held at Washington, D. C., in May, 1900.

Minnesota State Medical Society.—The new officers of this Society, the annual meeting having just closed in St. Paul, are: president, Walter Courtney, Brainerd; first vice-president, W. H. Magie, Duluth; second vice president, Helen Bissell, St. Paul; third vice-president, E. E. Bennett, Glencoe; treasurer, K. J. Hill, Minneapolis; secretary, Norman Davis, St. Paul. The question of the disposition of the $200 donated by the Society to the New Richmond cyclone sufferers came up, and it was decided to divide the money equally among the three practicing physicians of New Richmond, all of whom lost their homes by the disaster. The Society will meet in Duluth the last Wednesday in June, 1900. A further report of the meeting will appear in the JOURNAL.

St. Louis Medical Library Association.—This Association was recently organized and a goodly number of the representative physicians of St. Louis have joined. The intent of the organization is the development of a medical library which will be in harmony with the dignity and best interests of the medical profession of St. Louis. The following officers were elected for the year 1899: president, N. B. Carson; vice-president, John H. Duncan; secretary, F. L. Henderson; treasurer, A. R. Kieffer; librarian, Frank J. Lutz. The headquarters of the library are in the Young Men's Christian Association Building. The Association requests the various medical journals of the United States to put their journals on file with the Association, and would be glad to receive books from publishers, and indeed from all interested in the organization. Due credit for all contributions will be given.

French Congress of Ophthalmology.—Among the communications presented at this Congress, held at Paris recently, was Antonelli's report of fine results obtained in lachrymal affections with very small sounds made of gelatin and 50 per cent. protargol. Rohmer warmly endorsed the practice of open treatment of the eyes after operations for cataract. He has fully established that the natural occlusion of the lids and the lachrymal secretions maintain the aseptic conditions realized, while the daylight favors the contraction of the pupil and lessens the danger of hernia of the iris. He has his patients wear a small, light, loose curtain bandage over the eye, merely as a reminder not to touch them with the fingers. Gourfein stated that the lachrymal sac in rabbits can be infected with solid cultures of Koch's bacillus. De Wecker described his successful efforts to divert the exosmotic current traversing the retina, attracted by the excess of salts in the vitreous body, which he assumes may be the primary cause of detachment of the retina. He injects for this purpose salt solutions under the conjunctiva and the capsule of Tenon, preferring sodium sulphate and gelatin. This treatment favors spontaneous cure and can do no harm.

American Proctological Society.

Meeting, held at Columbus, Ohio, June 6-7, 1899.

SPECIALISM IN RECTAL DISEASES.

Dr. JOSEPH M. MATHEWS, Louisville, delivered this address setting forth the importance of giving rectal diseases special study, and said in part: "It is a notorious fact that there is more quackery practiced in the diseases of the rectum than in any other department of medical practice. This state of things is to be deplored. These important and most serious affections should be entitled to a separate and special consideration; and who will dare to say that those who practice them are not entitled to the privilege of forming themselves into a society? Nothing will contribute more to the advancement and to the elevation of this long neglected subject than this contemplated organization. The principal part of our knowledge must ever come from comparing our own observations with those of others; then how apparent to all must be the utility which the Society will afford in opportunities for the mutual communication of thought and action."

PRURITUS ANI.

Dr. TUTTLE said that the term "pruritus ani" has for the scientific physician only a vague significance, but for its victims it is portentous with evil. The condition should be dealt with, constitutionally, then locally. He is not a believer in pruritus ani essentially. The constitutional condition on which the theory of this disease is founded, he admits, and reckons it an important element; but he insists that there is always an exciting cause for the disturbance and on this cause will depend the physical appearance of the parts; and we know full well the diseases which cause these physical changes in the parts, and these diseases occurring in the dysesthesic patient instead of causing pain produce itching until the irritation and scratching of the parts produce pain.

Among the causes enumerated, he mentioned oxyuris vermicularis, colitis, sigmoiditis, catarrhal diseases of the rectum and uric acidemia. These pathologic conditions are the ones which he has found most often in obstinate and obscure cases. To the scientific physician all treatment must be based on his conception of the pathology of the case; remove the pathologic cause, treat the disease and not the symptom. Nitrogenous diet, alkaline diuretics, salicylic compounds and hot baths compose the general routine of treatment. Local applications of carbolic solutions, larkspur, black wash, salicylic acid, chloral hydrate, extract conii, camphor, cocain, tar, etc., may all be used in one form or another. Having determined the variety and type of the disease producing pruritis, it is not difficult to manage, and in most cases we may confidently expect a radical cure.

MODIFICATION OF WHITEHEAD'S OPERATION FOR HEMORRHOIDS.

Dr. EARLE of Baltimore, after reviewing usual methods of operations for removal of hemorrhoids, described his own method, which consists of clamping the tumors by sections, beginning at an incision in the fourchette where primary incision is made to determine the depth at which to place the clamp. After removing the tissue above the clamp by piecemeal, a continuous suture, beginning at the primary incision, is inserted around the clamp. When the first section has been cut away and sutured, the clamp is removed and the suture drawn taut, and the clamp again put in position until the whole anal circuit has been treated. He has given this method a thorough trial, and unhesitatingly considers it the safest, easiest, and by far the best method he has ever tried. The operation is practically bloodless, and healing by first intention is secured. The convalescence is complete at the end of the week.

ACT OF DEFECATION.

Dr. THOMAS CHARLES MARTIN, Cleveland, said that a knowledge of the anatomy of the rectum is necessary to form an appreciation of the physiology of defecation. The bundles of circular fibers which constitute the muscular element of the rectal valve belong to the same mechanism and have the same function as those which form the ental sphincter. It is the function of the normal rectal valve to beneficently retard the descent of the feces, and it is obviously true that it may be the especial property of the valve in certain other than normal conditions to maliciously obstruct the descent of the feces. His experience convinced him that a perfect knowledge of the rectal valve constitutes the key to an understanding of obstipation, rectal stricture and their sequelæ.

CONSTIPATION FROM THE STANDPOINT OF THE PROCTOLOGIST.

Dr. A. B. COOKE, Nashville, read an exhaustive paper on this subject, and defined constipation as a diseased condition of the alimentary canal characterized by a modification of function which results in the pathologic retention of fecal matter. He stated among the causes: 1, those springing from the violation of hygienic law; 2, defective innervation, expressed either in atonicity of the muscular coats of the intestine or in decreased secretion; 3, sluggishness of bowel function; 4, the habitual use of purgative medicines; 5 mechanic obstruction; 6, painful affection of the anus.

The relations between constipation and disease of the rectum are intimate and noteworthy in that either may be cause, effect, or both, with reference to the other. Rectal reflexes came in for a fair share of consideration. In conclusion he stated as his conviction that in a large proportion of cases constipation either originates in or is maintained by causes located in the distal ten inches of the intestinal tract. If this be true, the notorious inadequacy of ordinary treatment is at once accounted for, and the duty of the proctologist in the premises becomes obvious.

RECTAL ADENOMATA.

Dr. WILLIAM M. BEACH, Pittsburg, presented this subject. He defined an adenoma as a hypertropy of gland texture, noted briefly the nature of these growths and the value of the proctoscope in their early diagnosis and treatment. There are two principal types of adenomata: 1, the gelatinous, composed of elements of mucous membrane: 2, the mixed variety, consisting of mucosa and submucous cellular tissue. The adenoma with a long pedicle is benign, while growths with a broad base tend to malignity.

After discussing symptoms and complications, he pointed out that by means of the old methods of examining the rectum it is well nigh impossible to locate these growths of the upper rectum; and that the newer proctology substitutes exact methods in diagnosis and treatment of non-malignant adenomata that are most gratifying to both the patient and surgeon.

In conclusion he said that: 1, rectal adenoma may be hard or soft and contain the constituent elements of the mucosa and submucosa; 2, these growths are benign and malignant; 3, benign in their origin, they may become malignant; 4 early recognition is of first importance, and is made possible by the new methods of inspection.

POST-OPERATIVE TREATMENT OF HEMORRHOIDS.

Dr. J. R. PENNINGTON, Chicago, presented this subject, his tampon having been described in the JOURNAL of May, 13, p. 1061.

Illinois Society for Prevention of Consumption.

Prominent physicians and laymen organized this society at a meeting held in the rooms of the Chicago Medical Society, June 20, 1899.

The meeting was called to order by Dr. ARTHUR DEAN BEVAN, president of the Chicago Medical Society, who said that the prevention of tuberculosis is an important object, not only to the physician, but to the general public. Already so much has been accomplished by modern medicine in the prevention of disease, that difficult as the problem may seem, he ventures to predict that just as surgeons have prevented wound infection and suppuration in their operative work by the application of methods based on scientific knowledge of the causes of wound infection, so in the next few years it will be possible for the medical profession, aided by a better-educated public opinion and by state and municipal authorities, to practically eliminate tuberculosis from the community. Much has been done by German authorities in preventing trichinosis by proper inspection of hog products. Ten years ago trichinosis was common in Germany, and was the cause of a great many deaths, while now it is a comparatively rare and exceptional disease. Clinical research and laboratory investigation have proven conclusively that tuberculosis, like trichinosis, is one of the diseases communicated by animals to man. In this connection, he said he had now in his laboratory a microscopic section which furnishes a good deal of food for thought in this relation. From a butcher suffering from lupus of the face, diseased tissue was removed and Thiersch grafts placed over the raw surface. In the section there were found not only typic tubercular areas and bacilli of tuberculosis, but also trichinæ. Undoubtedly this butcher got the trichinæ from the pork which he had eaten. It is possible that in the same way he acquired tubercle bacilli from the animal food products which he handled.

Laboratory investigation has shown that a large proportion of the milk used in our cities contains bacilli of tuberculosis. The same may be said of butter, but to a less extent. Considering these facts: 1, that tuberculosis is produced by a known germ, and, 2, that the disease may be transmitted through some product of food or by some individual suffering from the disease, it does seem within the power of man, with our present knowledge, to eliminate this common disease from the community. To do this, we must have a widespread knowledge of facts. Public opinion must be educated, and we must succeed in obtaining laws which will prevent tuberculosis by proper inspection of dairies, etc.

REPORT OF COMMITTEE ON TUBERCULOSIS.

Dr. ARTHUR R. REYNOLDS read the report of the committee appointed last December.

"The undersigned, members of the general committee on tuberculosis, of the Chicago Medical Society, appointed for the purpose of formulating plans for the organization of a society for the prevention of tuberculosis, beg to submit the following report and recommendations:

"The formation of such a society, chartered by the State of Illinois under the act concerning corporations, is urgently recommended, and the time is opportune by reason of the universal popular interest in the disease. The society should be framed with reference to the popular interest. Hence its membership should consist, not only of medical men, but of the laity generally, and of both men and women.

"While it requires but three individuals to incorporate, its board of trustees should be large enough to insure a full representation of all desirable interests, and since it is proposed to extend its operation throughout the State, provision should be made for trustees from localities outside of Chicago. Their number may be fixed by the by-laws and need be specified in the certificate of incorporation."

On motion, the report of the committee was received and the committee discharged.

HON. CARTER H. HARRISON, mayor of Chicago, took the chair, and said the magnitude of the work to be undertaken is shown by the fact that one-tenth of all deaths are due to tuberculosis, and that being true, any effort made by the physicians of Chicago or anywhere else in the Nation to remove the causes of this dreadful disease and to discover means of exterminating it would be gladly welcomed and the subject of congratulation of citizens.

On motion, Dr. JOHN A. ROBISON was elected secretary pro tem of the meeting.

On motion of Dr. EDWARDS, a committee was appointed to report on constitution and by laws of the society.

Mr. JESSE COX was then introduced and said that tuberculosis is a disease due primarily to poverty and ignorance—ignorance which prevents people from knowing what to do to prevent the disease, and poverty preventing them from being able to carry out what they do know. As long as these two factors prevail, not all societies would be enabled to fully eradicate the disease, but much could be done toward its extermination by such a society as this. The public can be educated; the legislature can be educated and perhaps acted on in other ways. Laws can be enacted which will enable officers to meet the different regulations which can minimize the disease.

Dr. L. G. MARILLET spoke on behalf of the Chicago Veterinary Society, and presented a summary of some of the points which he was prepared to demonstrate: 1. That the tuberculin test for bovine tuberculosis is sufficiently reliable to be practical. 2. That the sale of milk from tuberculous cattle should be absolutely prohibited, and that the apparent absence of tuberculous processes in the mammæ of a cow is no assurance of non infectious milk. 3. That tuberculosis is raging among the dairies of Chicago and vicinity, and the population of Chicago is actually being infected with tuberculosis through its milk supply. This is a broad statement, calculated to scare people, but it is not made with any such intention. It is simply a fact which he is prepared to demonstrate. 4. That proper veterinary inspection of dairies will eventually result in purifying the supply, and such inspection can be conducted at very moderate cost. 5. That such inspection should be conducted under the directions of the Commissioner of Health of the City of Chicago, who, in turn, should collaborate with the state officers in their efforts to entirely exterminate the disease from domestic animals.

Dr. A. S. ALEXANDER followed and said that in order to insure absolutely wholesome, pure, innocuous milk we must have: 1. A perfectly healthy, clean cow. 2. She must be fed on perfect, sound, sweet, nutritous food. 3. She must drink uncontaminated water. 4. She must be surrounded by perfect sanitary environment and housed in a fine stable. 5. The milk so produced must be protected against secondary infection. Tuberculosis may be eradicated from any stable by the proper use of tuberculin.

Dr. WILLIAM A. EVANS, continuing the discussion, said it was not his purpose to say anything relative to the methods by which the work of the society is to be accomplished. He desired to speak to three propositions: 1. Tuberculosis is the most widespread and deadly of all diseases. 2. Its economic importance. 3 The conditions arising from tuberculosis are remediable. He said in part: Of deaths from all causes throughout the world sanitarians are agreed that approximately one in seven is due to tuberculosis. Hirsch says that each year throughout the world five million people die from this disease, the nature of which is understood. It is a disease which is preventable. According to the census of 1890, 102,188 people died of tuberculosis in the United States during that year. Recognizing the fact that statistics on the subject of tuberculosis are always below proper statistics, and recognizing the advantage, if not necessity, of concealing deaths from this fell disease, it is easy to be seen that the number of people who die from tuberculosis in the United States each year must reach 150,000. This is a safe estimate. According to the statistics of Zubiana, there die each year in

France from 150,000 to 200,000. In Germany, according to the statistics of Leyden, the number of deaths attributed to this disease each year is 170,000. According to the statistics of Tatham, endorsed by Ransome and Thorne, there die annually in England and Wales, 60,000 people or 241 for each 100,000; Vienna, 450 for each 100,000; Buda-Pest, 646 for each 100,000. In Philadelphia the annual death rate from this disease reaches 2800, or 11.6 of the total death rate. In New York City the annual death-rate from tuberculosis is 3500 approximately. In Chicago, from 1857 to 1896, 39,000 people died from this disease, thus constituting $\frac{1}{10}$ of the entire mortality for this city. In the last six months, according to the statistics of the Health Department, there were 1552 deaths from tuberculosis, or 1 death to 8.4 per cent. According to the statistics of France, Austria, Germany and Italy, approximately one-fifth of the entire death-rate of those countries is due to consumption. According to the Woman's Commission of Germany, at any given moment one out of fifty are either subject to or are suffering from this disease. On the basis of one out of sixty inhabitants, this means that to day there are in these United States 1,100,000 people suffering from tuberculosis. Figured on this basis, it means that in Chicago to-night there are 30,000 people who are affected with this disease. Biggs and Prudden of the Health Department of New York City say it is within the range of probability that there are 20,000 people walking the streets of New York serving as foci of infection for the spread of this infectious, contagious disease.

Dr. Evans then compared the death-rate from tuberculosis with the death-rate from other diseases, and gave the following: Smallpox and scarlet fever, 30 to 1; typhoid, 16 to 1; diphtheria, 8 to 1; all combined, $4\frac{1}{2}$ to 1. Tuberculosis kills thirty times as many people in Germany as do smallpox and scarlet fever combined. It kills sixteen times as many people as does typhoid fever; it kills eight timas as many as does diphtheria; it kills $4\frac{1}{2}$ times as many as smallpox, scarlet fever, typhoid and diphtheria combined. According to the statistics of Laveran, from 1832 to 1854 cholera killed 57,335, while tuberculosis kills the same number of people in one third of one year. According to the figures of Celli for Italy, from 1865 to 1893, cholera killed 214,657 people, and during the same length of time tuberculosis killed 2,000,000 people. Says Anders: "I have found from an examination of the literature and of the available official statistics, that in all great cities in which active measures have been taken to obviate the spread of tuberculosis, there has taken place a decided, though gradual decrease in the death-rate from this fell disease."

All sanitary legislation is based on antecedent education, and this is the philosophy of our existence to-night. There can come no legislation capable of coping with this disease until such a public sentiment has been created, until such a public view has been established that he who makes law will read what the sky contains for him. Ignorance is responsible for the conditions that exist. To awaken public conscience we must awaken public intelligence, and the scope of this Society is to awaken public conscience by reason of an awakening of public intelligence. A disease so well understood is one which can and surely will be combated. Practically every bit of laboratory work has been gone over in connection with this disease. The laboratories must furnish us facts that we can make all potent and all-powerful.

Dr. Evans then concluded by quoting the words of the Prince of Wales in opening the British Conference on this subject. "You tell me that tuberculosis is a preventable disease. If preventable, then why not prevent it."

At the conclusion of Dr. Evans' remarks, the report of the Committee on Constitution and By-Laws was read, and, after some discussion, was adopted.

Officers were elected as follows: honorary president, N. S. Davis, Sr.; president, John MacLaren; first vice-president, William A. Evans; second vice-president, Edwin Klebs; third vice-president, A. H. Baker; secretary, John A. Robison; treasurer, Elbridge G. Keith; councillor, John P. Wilson; trustees—for one year, Frank Billings, J. B. Murphy, Truman W. Miller, A. H. Baker, Joseph Hughes; for two years, Mayor C. H. Harrison, Otto Young, N. S. Davis, L. O. Goddard, A. R. Edwards; for three years, Arthur Dixon, D. B. Scully, E. B. Gurler, John B. Sherman.

The efforts of the Society with regard to legislative action will be: To urge the State Legislature to appropriate a fund adequate to the needs of the State Board of Live Stock Commissioners; this sum to be probably $50,000 for the first year, $30,000 for the second, and $20,000 the third.

To insist that the Legislature augment the executive force of the Live Stock Commission sufficiently to enable the Commission properly to fulfill its duties.

To urge that the Commission be empowered to administer the tuberculin test to all cattle in the state without the consent, or, if necessary, against the wishes of owners of cattle.

To make it necessary that the Commission begin a systematic examination of all cattle in the state, in which all cattle not proving under the tuberculin test to be free from tuberculosis shall be condemned, and the owners compensated by the state at the scale of prices fixed by the Live Stock Commissioners.

To devise and recommend an efficacious plan for the prevention of the sale of tuberculous milk in Chicago; this plan, modeled for the most part after the method adopted by Buffalo, to recommend that the Common Council enact an ordinance creating a force of experts in veterinary medicine whose duty it shall be regularly to inspect the dairies supplying milk to the Chicago market, whether or not such dairies be within the city limits; and the plan further to provide that no can of milk shall enter the milk depots of Chicago without a number corresponding with a number on the sanitary report of the dairy from which the milk was shipped.

It is said, the Board of Trustees of the Society will meet on the first Saturdays in January, April, July and October. The Society will meet annually or oftener, if deemed necessary.

Chicago Medical Society.

Regular Meeting, held June 21, 1899.

SCIENCE OF MEDICINE AND ITS RELATIONS TO THE PUBLIC.

D. ARTHUR DEAN BEVAN delivered an address as president of the society. He began by saying that there is to day, at the close of the nineteenth century, a science of medicine just as truly as there is a science of chemistry, or of astronomy or anatomy. It is customary to deny to medicine the right to be called a science, and in the past centuries, and even until the past decades of the present century it was very proper to withhold this right; but the birth and development of modern pathology and bacteriology, and the development of physiology and anatomy and chemistry have changed this. These sciences are entitled to the highest claim of science and medicine which, in a broad sense, is the study of the human body in health and disease, and, resting largely on these collateral sciences, has itself become a science. It is difficult for some medical men and for the public to realize this fact. Its general recognition will be a great gain for the world. Such a recognition must abolish from the thinking mind the poor, weak, temporary dogmas which have always clung to the skirts of medicine and which have masqueraded as new schools of medicine. Because if medicine is a science, there can be but one science of medicine. There can be no room for dogmas, and these dogmas dead will exist only as dried specimens on the shelves of medical history. If new dogmas arise, they will find adherents only among the queer people who to day still consult the astrologer or clairvoyant.

To prove that medicine is to day a science, let a few cases be examined with a modern medical man. A patient presents herself to the physician with a history of cough and emaciation. The physician analyzes the body of this patient as a chemist would analyze a substance submitted to him for examination. He considers the form, color, temperature of the body and the density of the lung tissue. He examines the sputum and finds the bacilli of tuberculosis. As a result of his analysis, his finding is that the patient has tuberculosis. Just as one chemist analyzes a substance and finds arsenic in it, so a man presents himself to a surgeon with a tumor of the neck, the surgeon considers the history, examines a small piece of the tissue under the microscope and finds actinomyces. As a result of his examination, he knows that the patient has lumpy jaw, just as the chemist might analyze a piece of ore and find gold in it.

Medicine is a science and, like all sciences, it is dependent on other sciences. Just as chemistry is dependent on physics and mathematics, so medicine is dependent on chemistry, pathology and anatomy. Medicine does not hesitate to borrow from any branch of knowledge that may aid in its development, and it follows that as these aiding sciences develop medicine will advance. Medicine must let the world know that it begins the twentieth century as a pure science, and that it has left behind it the mystery, the superstition, the dogmas of the past.

The teaching of medicine must be in the hands of scientists. Students of medicine must be taught its truths and its limitations. The public with its evergrowing ability to grasp knowledge, must be taught its truths and frankly told its limitations. Nations and communities must learn to recognize great medical truths and enforce laws based on them for the welfare of their citizens. The practice of modern medicine means the

throwing overboard of a large part of the present materia medica. It means the starting on purely scientific lines, the building of a scientific system of therapeutics. Why should not the intelligent patient know that when he has pneumonia or typhoid, or, with few exceptions, almost any form of disease, no physician in the world to day can cure the disease with medicine? If he gets well, he cures himself. All that the physician can do is to surround him with conditions most favorable for his recovery. Let the public possess this knowledge; it will in no way belittle the office of the physican.

The country consumes millions of dollars worth of drugs each year, for the most part to the detriment of the consumers. Is it not the duty of scientific physicians to instruct the public as to the uselessness and danger of such folly. This task of revolutionizing medical practice can not be accomplished in a day; it will require years of time and much labor. It is, however, time to begin; it has already begun.

Medicine as a science will continue to grow; it will crush the dogma and the false, and in the end take its place as the highest and most useful branch of human knowledge.

Dr. Bevan then discussed the great duty which the science of medicine owes to the public, under four heads:

1. By developing and teaching the science and practice of medicine along purely scientific lines.

2. By demanding a high standard of knowledge and efficiency of men desiring to practice medicine.

3. By educating the public in the great truths of medical science.

4. By obtaining national, state and municipal recognition of the great medical truths which can be incorporated into laws for the good of the community.

These four propositions were considered separately. In Chicago there are twenty medical colleges. Possibly three of these are sufficiently well conducted to warrant their recognition as scientific schools; the others have no right to such a claim. They represent either some paltry or a pathologic desire of a group of men for the title of professor and the opportunity to advance and advertise themselves. This results in the turning-out of poorly-equipped medical men and the lowering of physicians generally in the eyes of the people. Let such professors with their cheaply bought titles pause and think what they are doing. The members of the Chicago Medical Society should place the stamp of their disapproval on such work.

Modern medicine demands a scientific training. The modern medical school must drill its students in the sciences of anatomy, physiology, pathology, chemistry, and pharmacology in well-equipped laboratories. These laboratories must be not only teaching mediums, but workshops for the discovery of new truths. After this preliminary work the student will study medicine, surgery, obstetrics and the specialties in well-equipped hospitals and dispensaries, and these hospitals and dispensaries must be not only places where patients are treated and students study, but they must be true laboratories where the problems of the human body in health and disease will be worked out, and from these laboratories must come the discoveries of new truths.

As our government is constructed, it is probable that it would be impossible to obtain a national law controlling medical practice, although such national control in the opinion of the speaker would be most desirable. In Illinois we are in a transitional stage; spasmodic efforts have been made by the better element of the profession to obtain effective medical legislation. During the last year considerable work was done by the Illinois State Medical Society and the Chicago Medical Society in the attempt to pass a medical bill which would have raised the standard to the present excellent standards of Minnesota and New York. This attempt failed and resulted in a compromise which is unfortunate and must be corrected. Every physician who desires to practice medicine in the State of Illinois should show evidence of a fair preliminary education and of four years' study in a recognized medical school. This evidence should entitle him to come up for examination before a State examining board. He should be examined in the cardinal branches of medicine, and if he shows proper fitness, be granted a license to practice. The diploma should under no circumstances be accepted as evidence of fitness. By united efforts the physicians of Illinois can have a satisfactory medical bill passed through the next legislature.

The third and fourth propositions which Dr. Bevan discussed are so closely correlated that he treated them together, viz.: 3, by educating the public in the great truths of medical science; 4, by obtaining national, state and municipal recognition of the great medical truths which can be incorporated into laws for the good of the community. These are broad subjects and can be but briefly referred to. When we see the good accomplished by vaccination, by quarantine against yellow fever and cholera, by antitoxin in diphtheria, the lessening of typhoid by pure water supply, the elimination of trichinosis by inspection of hog products, as done in Germany, and now the great awakening in regard to the prevention of tuberculosis, one must be impressed with the tremendous possibilities of preventive medicine. The realization of these possibilities depends on the education of the people in the dangers of disease, the cause of disease, and the practical methods of prevention. When the mass of the people are once educated in dangers and means of prevention of disease, the necessary legislation will soon follow.

Finally, he desired that his address should emphasize two great functions and duties of the Society:

1. A demand for a higher standard of medical education and laws enforcing such demand.

2. The education of the public in the great established truths of medicine, the cause of disease, the known methods of prevention, and laws which will make this knowledge operative and effective.

With high ideals, with united effort, the Chicago Medical Society can accomplish much for the science of medicine and the good of mankind.

Following Dr. Bevan s address, the annual reports of the trustees, editor, treasurer, secretary, auditing and standing committees were read and disposed of.

The election of officers resulted as announced in the JOURNAL, June 24, p. 1458.

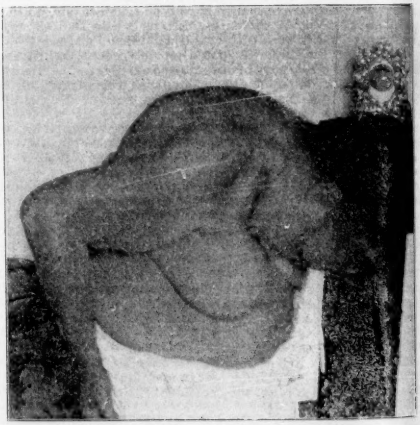
Appropriations were then voted for salaries as follows: for secretary, $300; for treasurer, $200.

Orleans Parish Medical Society.

Meeting held in New Orleans, La., May 27, 1899.

SPINAL CURVATURE, DORSOCERVICAL.

Dr. H. A. GILBERT related this case, occurring in C. Q., a native of Germany, 62 years of age, the mother of six children. She enjoyed good health up to the time of the climacteric, seven years ago. She was a large well-nourished woman, weighing 245 pounds; there was no history that threw any etiologic light on her case, save that of imprudence in exposing



herself to cold and dampness. About the time of the menopause she was troubled with rheumatism, which readily yielded to treatment. Later the patient lost the use of her left arm by paralysis, subsequently recovering it completely. She was next affected with paralysis of the muscles of the back, the head becoming bent forward and a little to the right, so that the chin came to rest on the sternum, in which position it has remained during the past four years. The patient is quite well otherwise, eating and drinking with zest, while at first she could see objects only when tilted back considerably, and the button holes which she had learned to make in her acquired position were crooked. She can now, thanks to the persistent use by Dr. Gabert of nux vomica, iodid of potas-

sium and electricity, not only see persons at some distance from her, but also cut her button holes straight.

Dr. HAMILTON P. JONES was inclined to think that perhaps the condition was due, not to paralysis, but to the adoption of that position which gave greatest relief from rheumatic pain in the neck. In his own attack of rheumatism, some years since, he had felt ease with his head flexed, and he had had to exercise some will power to keep from acquiring a faulty position.

Dr. C. J. MILLER suggested that the case might be one of arthritis deformans. He had had a case of this disease of eleven years' standing, under observation, in which the head was drawn back and there was involvement of various joints, notably of the temporomaxillary, which was the seat of partial ankylosis. In this case no benefit whatever had resulted from rheumatic treatment.

BOWEL TROUBLES IN ADULTS.

Dr. GEO. STUMPF sounded the praises of mercurous chlorid, while Dr. R. J. Mainegra favored the use of opiates and astringents, particularly of the camphorated tincture of opium and preparations of catechu.

Dr. MILLER referred to the treatment of amebic dysentery recommended to him by Dr. W. H. Watkins, a fellow member. During the past eighteen months he has used infusion of ipecac by the rectum in this condition, never failing to obtain relief from tenesmus and bloody stools. Regarding the use of opiates in the enterocolitis of children, he mentioned the fact that in several of these cases he had found albumin in the urine; in one such case opiates had had an immediate bad effect, having to be withdrawn.

GONORRHEA AND MARRIAGE.

Dr. H. B. GESSNER brought up the matter of warning patients treated for gonorrhea not to marry until the disease is known to have been completely cured. He had under his care a young man who contracted gonorrhea in June, 1898; various injections had been used, causing a disappearance of the discharge from the meatus. Learning recently that this man was about to marry, he caused him to have his semen examined, and gonococci were found. This patient had never been warned of the danger of communicating the disease to an innocent wife. Surely it must be the duty of the physician treating such a case to warn the sufferer of the possible dangers to others, just as he would prohibit marriage for a term of years in a case of syphilis.

Dr. PHILIP ASHER mentioned a case of pyosalpinx operated on by Prof. Ernest Lewis, in which the infection was traced to an attack of gonorrhea in the husband six years before marriage.

Dr. MILLER knew of three men who had infected their wives through ignorance of the possibility of doing so. In one patient, who had had gonorrhea a year and a half before, clap threads were present in the urine. Two weeks of irrigation with permanganate solution caused all evidences of infection to disappear. Three months later his bride developed ovaritis and salpingitis; gonococci were found in the removed adnexa.

Surgeon CORDEIRA, U. S. N., assigned to the cruiser *New Orleans*, made some remarks on the sanitary conditions aboard that vessel. He said that there had been but little sickness among the 400 officers and men of that vessel during the twelvemonth past, during which she formed part of the blockading squadron off Santiago, and later cruised in the vicinity of San Juan (Porto Rico). While on this duty in the heat of summer they had been compelled to sleep on deck under the open sky, on account of the great heat stored up in the metal war machine with its dark paint. There had been no colds, no rheumatism, no infectious disease at this time, save a la grippe epidemic while off San Juan. This good health Dr. Cordeira attributed largely to the use of distilled water, mentioning in support of his view an observation at Guantanamo. The marines at this point, drinking distilled water from the *Marblehead*, enjoyed excellent health, while some Cubans encamped near by were much troubled with dysentery. Again, those on board the little vessels *Scorpion* and *Wasp*, which had no distilling plants of their own but were supplied with water from the *Marblehead*, enjoyed good health until one day, forced by want, they took on board water from Daiquiri. In a short time the *Scorpion* had thirty men sick with malarial fever; the same disease also developed aboard the *Wasp*.

Dr. T. S. DABNEY asked whether there had been any mosquitoes in the neighborhood, and whether any disease, e. g., nephritis, had followed the prolonged use of distilled water.

Dr. CORDEIRA answered that no mosquitoes had been seen on the vessel while they were cruising off the Antilles; he had never observed any ill effect from the use of distilled water, which he himself had been drinking for fifteen years.

Philadelphia Pathological Society.

Meeting held June 22, 1899.

LYMPHATIC DIATHESIS.

Drs. BRYAN and WALSH reported a case with sudden death, the patient, a boy three weeks of age, who, when put to bed at night, manifested no signs of illness. On the following morning he was found dead. Autopsy showed the thymus gland markedly enlarged, covering the larger blood vessels of the neck and extending downward to the heart. There were two decided enlargements of the gland, one on either side connected in the middle portion by a smaller band. The weight of the gland was 28.33 grams. The tonsils were enlarged and lungs congested, as was also the left kidney. There were no signs of syphilis. Microscopically the thymus had the appearance of being normal with the exception that more lymph follicles were present. Enlarged follicles were also present in the spleen and intestines.

Hood called attention to the fact that sudden death occurred in cases in which the thymus was found to be enlarged. Jacobi, in 1888, also spoke of the subject. In one case it was thought that death had probably been due to compression of the trachea, but this idea has been partly overruled by another writer, who stated that in order for the thymus to cause compression it would necessarily have to be ten times larger than the normal gland. Another writer attributed sudden death in these cases to compression of the pneumogastric. More recently it has been held that death results from what may be known as the lymphatic diathesis, the exact cause of which we do not know. A section of the thymus was exhibited, stained by the Van Giesen method, which showed Hassel's corpuscles.

Dr. DAVID RIESMAN referred to the Berlin case in which sudden death had occurred after the administration of a dose of antitoxin. The autopsy had shown that the thymus was enlarged. He had last year performed autopsy on a case in which sudden death had occurred during anesthesia. In this case the follicles of the intestines were enlarged. It was possible that some cases in which sudden death occurred during recovery from diphtheria and typhoid fever might be attributed to lymphatic diathesis.

Dr. GEORGE B. WOOD spoke of those cases in which Dr. Kocher had attributed sudden death from chloroform anesthesia to the same cause.

Dr. ALBERT WOLDERT stated that some surgeons, in operating for goiter, have recommended that previous to removal of the gland the blood vessels be ligated in order to prevent profound depression or collapse held to be due to absorption of the glandular fluid, and as Dr. H. A. Hare had reported a case in which somewhat alarming symptoms followed a blow on the thyroid, these cases of sudden death in lymphatic diathesis might possibly be due to a form of rapid autointoxication.

ADDISON'S DISEASE.

Dr. W. E. HUGHES presented several specimens, the first being those found in a case of this disease. In this case discoloration of the skin first began on the face. A brief history of the case was as follows: A year previous to the time he presented himself for treatment the discoloration of the face began. Three months previously there had been severe pain in the right lumbar region, afterward located in the dorsal region, and still later a sharp pain was complained of in the left lumbar region, followed by vomiting. At one time temporary improvement occurred, but death finally ensued. At the autopsy the lungs were found in a state of fibroid phthisis, abdominal glands enlarged and cheesy, left kidney small, adrenals not much enlarged but thickened and cheesy masses were found throughout. In some cases of the cheesy masses, distinct ramifications of tissue were present, extending from the periphery inward.

IMPACTION BY GALL-STONE.

Dr. HUGHES also presented a specimen of common bile-duct, in which there had been impaction produced by a gall-stone in which rather sudden death occurred. The common duct was almost closed by the stone; at one point slight dilatation was present, and below this the duct was again patulous. A specimen of retroperitoneal sarcoma was also exhibited by the speaker. In this case there had been no history of syphilis. Several months before entrance into the hospital the patient stated she had noticed that a lump had suddenly developed in the abdomen on the left side near the lower border of the ribs. Subsequently slight pain was complained of, but the presence of the lump seemed to be the greatest complaint. It was thought that the tumor was not attached to the kidney, from the fact that the hand could be slipped downward between the tumor and the lower border of the ribs, further that the

tumor was slightly movable and was covered by several loops of intestines, whereas in the case of tumor of the kidney only one loop of the bowel was usually present. He had seen three cases of retroperitoneal sarcoma.

The speaker also exhibited a carcinoma of the pancreas with compression of the common bile-duct. The gall-bladder had contained a large amount of pus and several gall stones. The cystic duct was obliterated.

Dr. JOSEPH SAILER, in detailing the clinical symptoms, stated that the case had been one of considerable interest because it had been a question as to where the seat of obstruction lay, whether primarily in the common duct or in the pancreas. Hydrochloric acid had been present in the gastric contents. The patient had not vomited blood.

Dr. H. A. HARE spoke of a case of a young man in which after a blow on the abdomen, there rapidly developed multiple sarcomatous growths in various parts of the body. In another case after the removal of a small abdominal tumor it appeared that there had been general dissemination subsequently, as deaths soon followed from multiple sarcomatous growths.

HYDROCEPHALUS.

Dr. DAVID RIESMAN presented a specimen of hydrocephalus in a male of 17 years. The patient had during life suffered from several severe accidents to the head, and later suffered from dementia. At the autopsy the heart and lungs were considerably larger than normal, as also were the suprarenals. The weight of the brain was fifty-eight ounces. The ventricle of the corpus callosum was obliterated. The foramen of Monroe was patulous; the pia mater stripped off readily; the specific gravity of the fluid in the cranial cavity was 1011 and contained no sugar. Regarding the essential pathology of hydrocephalus, one writer had looked on it as due to a form of serous meningitis, but this question has not been settled. Another writer found that in hydrocephalus the medulla of the suprarenals was as a rule affected, while the cortex might seem normal.

CYSTIC TUMOR OF TESTICLE.

Dr. RIESMAN also exhibited a specimen of cystic tumor of testicle, removed from an insane patient 51 years of age. The man had during life suffered from double scrotal hernia, on the left side being composed of a loop of intestine which was adherent to the sac. A polypoid tumor of small intestine was also exhibited by the speaker, which on examination proved to be a leiomyoma. The speaker also presented specimens of gall stones removed from an insane patient. He called attention to the large number—10 per cent.—of insane persons in whom these foreign bodies were present, and also that in cases in which the stone lay in the common duct the gall-bladder was usually contracted, doubtless due to an inflammatory process extending upward.

Cleveland Medical Society.

Meeting held April 9, 1899.

TYPHOID BACILLUS AS CAUSE OF POST-TYPHOIDAL SUPPURATION.

Dr. W. T. HOWARD, in a paper on this subject, called particular attention to the considerable number of cases of typhoid in which there are complicating suppurative processes, and that in nearly all of these the typhoid bacillus is the direct cause of the suppuration. The danger of the typhoid infection to the physician or nurse caring for these cases is very definite. There are now a number of carefully recorded cases of typhoid in which the bacillus occurs in the body without the characteristic lesions of the ileum and colon. The typhoid bacillus when it gains entrance to the intestine does not necessarily produce ulcers. Post-mortem it is always necessary to make cultures before it can be positively stated that the disease was not typhoid.

Dr. L. G. TOWSLEE asked in what percentage of cases typhoid can be diagnosed by a bacteriologic examination of the urine.

Dr. R. J. WENNER asked how long after an attack of typhoid the Widal reaction holds good.

Dr. H. S. UPSON pointed out the probability from recent progress of an entire regeneration of our nomenclature of disease. Formerly we named diseases by a symptom-complex; then we began to name them by their typic pathologic lesion, but now we are approaching a much better method of classifying them according to the germ which causes them.

Dr. HOWARD, in closing, said that Richardson found the typhoid bacillus in the urine in a considerable proportion of cases, and that in some cases the bacillus appeared in the urine early and in others late in the course of the disease. The Widal test being really a reaction of immunity, the blood serum of a person who has had typhoid will give it for a very long time after the attack. Just how long we do not yet know. The only scientific way of classifying disease is according to etiology. He is in the habit of saying to students that diphtheria is any process in any part of the body caused by the diphtheria bacillus. In answer to a further question by Dr. Wenner he said that he did not consider the diazo reaction of much importance in typhoid, because it occurs in so many other diseases with which typhoid is likely to be confused.

CEREBROSPINAL MENINGITIS.

Dr. C. J. ALDRICH made some remarks on the epidemic of cerebrospinal meningitis now occurring in Cleveland, promising at a later date full report of two necropsies of cases at the City Hospital. He spoke of the great value in the diagnosis of the disease of "Kernig's sign," which has not yet been properly estimated at its full value by the profession. It is very simple, consisting in inability for a child with meningitis to sit on a bed with the legs extended flatly, for owing to a contraction of the hamstring muscles they are bent at an angle of 20 degrees or more. Lumbar puncture is undoubtedly the most valuable method of diagnosis, but requires an extensive laboratory to make the necessary careful cultures.

Dr. W. G. STERN showed cultures from the cases of cerebrospinal meningitis at the City Hospital. The diplococcus intracellularis was found in the culture from serum obtained by lumbar puncture in one case. It was found that simply inoculating the culture-medium with a drop or two of the suspected fluid was unsatisfactory. It was found to be much better to overlay the medium with 5 to 10 c.c. of the serum, when growth took place readily.

Dr. WENNER noted that the cerebrospinal fluid from a case of meningitis, if examined closely will always show some clouding.

Dr. HOWARD reported a recent case at Lakeside Hospital, in which the fluid drawn by lumbar puncture seemed clear but on putting it in the centrifugal machine a considerable amount of sediment was obtained from which cultures were readily made. This case had no eye symptoms, but had slight deafness and delirium which soon passed away leaving the case with practically no symptom but weakness, and becoming an apparently chronic case. In a necropsy done for Dr. H. W. Wickes of the Marine Hospital there was a large amount of thick yellow pus at the base of the brain. The optic and olfactory nerves were covered with thick pus. Pus was also found in the pia-arachnoid under the surface of the cerebellum. Cultures could not be made from this pus, probably because the organisms were in the cells. It was noticeable, however, that the total amount of pus was less than one would expect would cause death, leading to the conclusion that the toxins produced by the organism must be very virulent.

American Medical Temperance Association.

This association, composed of members of the AMERICAN MEDICAL ASSOCIATION, and having a membership of over one hundred and sixty active practicing physicians in the United States, held its annual meeting at Columbus, Ohio, June 8. The president, Dr. N. S. Davis of Chicago, delivered the annual address: "Is There any Causative or Etiologic Relation Between the Extensive Use of Alcoholic Drinks, and the Continued Increase of Epilepsy, Inebriety, and Insanity, Both Mental and Moral, in all Countries of Europe and America." The secretary, Dr. Crothers, reported greater activity and inquiry during the past year. Twenty-six papers on alcohol and inebriety have been read during the past year in the different medical societies in the regular profession in this country. Nearly four hundred papers and notes on these topics have been indexed in the medical journals of America alone. The election of officers resulted as follows: president, N. S. Davis, Chicago; first vice-president, H. A. Didama, Syracuse, N. Y.; second vice-president, Dudley S. Reynolds, Louisville; third vice-president, W. T. Bishop, Harrisburg, Pa.; secretary, T. D. Crothers, Hartford, Conn.; corresponding secretary, J. H. Kellogg, Battle Creek, Mich.; treasurer, G. W. Webster, Chicago.

Examining Eyes of Children.—Few children would escape if the eyes were examined in the primary grades. Besides the benefit of discovering and curing ocular troubles in the incipient stage, there is the additional benefit of warning parents of incurable affections which would forbid certain trades or professions, thus preventing useless expense and disastrous consequences. H. Cohn of Breslau has recently published a tabulated report of the eyes of every school child in Breslau (50,000). He considers it very important that the examinations be made in the open air.

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SATURDAY, JULY 1, 1899.

DISORDERS OF PERIPHERAL NERVES IN INFECTIOUS DISEASES.

Within the last few years a large number of cases have been reported in medical literature in which various symptoms indicating disordered activity of the peripheral nerves in the course of infectious diseases have been observed.

Some years ago Ross and Bury, in their well-known essay on "Peripheral Neuritis," pointed out that the great majority of cases of paralysis which have been recorded as following typhoid fever were not due to cerebral or spinal lesions, but to changes in the peripheral nerves, and the studies which have been made of the nerve alterations which take place in diphtheria have also shown that in a certain proportion of cases the degenerative change exists in the peripheral nerves rather than in the central nervous system.

In this connection, it is interesting to note that that most frequent infectious disease, pulmonary tuberculosis is also capable of producing results similar to those to which we have just referred, and literature in which cases of this character are recorded is not lacking. Pitres and Vaillard, two French writers, dealt with this subject as long ago as 1886 and in 1894 Carriere wrote on the subject in a Bordeaux thesis. More recently Carriere once more approaches this subject. He believes that disorders of the peripheral nerves in the course of pulmonary tuberculosis are very frequent, that they are more frequent in men than in women, that they by preference attack adults, are seen most commonly in the advanced stages of the disease and naturally occur in the chronic or subacute forms.

The manifestations produced by these lesions involve the functions of locomotion, sensibility, nutrition and vascular supply. In regard to disorders of locomotion or the secondary changes which take place in the muscles as the result of neuritis following tuberculosis, we find that the lesions may be limited or wide-spread; sometimes they involve the muscles in one limb or in part of one limb; at other times they are symmetric in both limbs and they usually develop slowly and insidiously.

In two cases which he has observed, the condition of atrophy of the muscles was like that which is seen in Aran-Duchenne paralysis. Unlike certain other forms of paralysis following neuritis with wasting and loss of power, when once developed it is usually fixed and does not have periods of temporary improvement. Certain masses of muscles seem to be particularly prone to this condition, as for example the pectoral muscles and the deltoids. On the other hand, in a certain proportion of cases the muscles of the lower extremities suffer more than those of the upper, and in certain instances, as is well known, tapping the muscles will produce a condition of undulating fibrillary contraction. In other instances, tremor is quite marked, it is usually of the small, rapid variety which disappears during the rest and may simulate that of disseminated sclerosis. For the same reasons the reflexes are usually disordered, sometimes being much enfeebled, at other times exaggerated, but it is a noteworthy fact that the pupilary reflexes are unaffected.

Neuralgia, as every physician knows who has treated this class of patients, is very frequent, occurring in not less than 75 per cent. of the cases and most frequently involves the intercostal and sciatic nerves. A more rare phenomena, which Carriere has observed in two cases, was false angina pectoris, in which the pains were severe and closely resembling those of true angina.

In regard to disorders of sensation, patients often complain of local sensations of heat and cold, particularly of the extremities, the hyperthesia over the muscles, particularly of the chest and neck, and a marked tenderness about the joints and over the surface of the tibiæ. In regard to trophic lesions, we find glossy skin, lesions of the nails, zona, and, as is well known, pulmonary osteoarthropathies. Of the serious local vasomotor disturbances we have localized urticaria, sweating, local asphyxia and itching of the skin. These various changes produced in the peripheral nerves by these infectious processes are undoubtedly due to the influence exercised by the toxins of the disease.

In the way of treatment, it is evident that one of the first necessities is to aid in the elimination of toxic material as much as possible, to insist that the patient should take a certain amount of rest and conserve his energies, that he shall have good, nutritious food, easily digested, and that the medicines which are employed should all of them be roborant in their character. While at first glance such drugs as antipyrin, quinin and other analgesic substances would seem to be indicated, as a

matter of fact these drugs, particularly the first, frequently seem to ultimately increase the difficulty by impairing the activity of the blood and Carriere thinks that local applications of oil of gaultheria, of menthol or guaiacol, chlorid of ethyl or of mentholated ether are much to be preferred as a means of remedying painful manifestations.

HEREDITARY TRANSFORMATION IN FICTION.

Some thirty years ago Moreau (de Tours) pointed out that an "incorrect conception of heredity looks for identical phenomena in each succeedng generation. Some have refused to admit that mental faculties were subject to heredity, because the mental character of the descendants were not precisely those of the progenitors. Each generation must copy the preceding. Father and son must present the spectacle of one being, having two births, and each time leading a different life, under the same condition. But it is not in the heredity of function or of organic or intellectual facts that the application of the law of heredity must be sought, but at the very fountain-head of the organism, in its inmost constitution. A family whose head is insane or epileptic does not of necessity consist of lunatics or elileptics, but the children may be idiotic, paralytic or scrofulous. What the father transmits to the children is not insanity, but a vicious constitution which will manifest itself under various forms in epilepsy, hysteria, scrofula, rickets, etc. This is what is to be understood by hereditary transmission."

The law thus laid down is simply an expression of the beneficent operation of atavism, whereby the type characters resist the acquired defects of the individual parent. The acquired defect taking the line of least resistance, according to the depth of degeneracy, the condition of the mother during pregnancy, and the condition of the father at the time of conception, manifests itself in a greater or lesser degree. Moreau indicated the lines along which such indications should be pursued when he divided the conditions due to degeneracy, in a family, into the following categories: 1, absence of conception; 2, retardation of conception; 3, imperfect conception; 4, incomplete products (monstrosities); 5, products whose mental, moral and physical constitution is imperfect; 6, products specially exposed to nervous disorders in the following order of frequency: epilepsy, imbecility or idiocy, deaf-mutism, insanity, cerebral paralysis and other cerebral disorders; 7, lymphatic products predisposed to tuberculosis and allied disorders; 8, products which die in infancy in a greater proportion than sound infants under the same condition; 9, products, which, although they escape stress of infancy, are less adapted than others to resist disease and death.

The transformation of heredity is so often ignored even by the profession that it is hardly astonishing to find that the lay press entirely neglect it. In a recent review of "The Maternity of Harriett Wicken," by Mrs. Dudeney, the *Chicago Evening Post* remarks: "The author has neglected part of her opportunities. Harriet is the daughter of an ill-starred house, wherein, according to the dictum of Dr. Kiernan, there is degeneracy taking on many forms, all of them noxious. There is drunkenness, ne'er-do-well men and women, insanity, epilepsy, rickets and all the rest. Harriet chances to be skipped, in accordance with another law not well understood and is a fine specimen of the human animal. She marries a man with a robust longing for fatherhood and her baby is witless. It has been clearly shown that genius, too, runs along these same lines of degeneration. It is no less true that such spirits as Mark Tapley's are quite as capable of transmission to descendants as the evil qualities which make up the burden of Mrs. Dudeney's chapters.

"Into all lives, not only rain but sunshine falls; and it seems to be the author's misfortune here to have been unable to devise more than a moment's compensation to for all the woes of which her heroine is the unintentional conduit. Were the novel more forceful it would carry the tragedy better. It is well-planned and clearly written, but it lacks contrast which should have been given it in the failure of strength. Like all novels based on inheritance it takes a pessimistic view; and Mrs. Dudeney cannot realize that there are pleasures in which she has had no share."

This criticism is in the main part just, but credits Dr. Kiernan with priority in views to which he makes no claim. It further displays the usual ignorance of the influence of the law of atavism in a normal direction. There is very little doubt but that atavism does dispose of much degenerate heredity, and would dispose of more were it not that the last is assisted by environment. The beneficent influence of atavism is shown in the ease with which the United States has assimilated the defectives poured into it for centuries. The criticism of the pessimistic tendency of heredity depicted in fiction is therefore just. Mrs. Dudeney missed an excellent opportunity of teaching an optimistic lesson, by making the witless child a cretin and treating it with thyroid extract. This phase of the subject has hitherto been neglected in fiction. The beneficent effects of atavism were taught by Eugene Sue in "The Mysteries of Paris," in the case of the morally sound members of the Martial family. Of course, the classic fiction dealing with the transformation of heredity is the "Rougon-Marquart Series," of Zola. Here atavism is often beneficent in its effects.

STANDARDIZATION NEEDED.

The revision of the "United States Pharmacopeia," which is to be done next year is a matter of sufficient importance to receive the serious consideration of the profession. The physician is the one who has the greatest interest in the reliability and availability of the products of the pharmacist. They are part of the tools of his trade and on their efficiency his success to a

greater or less extent depends. It is a well-known fact that many of the crude drugs that form the basis of the pharmacopeial preparations are far from being as reliable as their proper medical usage demands. When such physiologically powerful drugs, for example, as colchicum, conium, hydrastis, hyoscyamus and others may vary in their content of active principle 200 to 300 per cent. in different samples, as has been amply demonstrated by competent authorities, it would seem that something ought to be done to eliminate these fluctuations of the crude drug from the official preparations. If the latter are not uniform in medical potency, what confidence can be placed in them or in the pharmacopeia, which certainly ought to be a reliable guide for accurate dosage and medication?

It is true, the last edition of the pharmacopeia did provide standards for cinchona, opium and nux vomica and the recently published "British Pharmacopeia" goes a step further and "standardizes" ipecac and belladonna, but the principle has not yet been made to cover calabar, coca, colchicum, conium, gelsemium, hydrastis, podophyllum, stramonium or veratrum, to say nothing of important drugs such as aconite, cannabis indica, digitalis, ergot and strophanthus, which defy any and every chemical test thus far elaborated, and which, to be assayed at all, must be tested pharmacologically on the living animal.

It is, perhaps, demanding too much to ask the revisers of the Pharmacopeia who are soon to enter on their decennial task, to provide standards for all powerful drugs, but it seems to be well within the bounds of the reasonable and moderate to urge the expediency of extending the principle of chemical standardization to all drugs susceptible of accurate chemical assay and also of adjustment, by chemical means, to uniform standards based on a fixed percentage of active principle or principles in the finished preparation. Surely, the physician has enough to perplex and baffle him in the idiosyncrasies of individual patients, and in the irremediable difficulties of diagnosis—may he not justly demand protection from the disaster which follows in the train of a weak, inert, unreliable drug product, or of a preparation possessing an unusual and dangerous potency? The golden mean between the worthless and the toxic ought to characterize every fluid extract, solid extract or tincture administered in the treatment of disease.

The very general use of diphtheria antitoxin and the growing employment of an antitetanic serum for prophylactic purposes have acquainted the profession with the fact that the curative serums can be tested and standardized only by the physiologic method—by observing how much of the serum will preserve from sickness a test-animal into which is injected simultaneously ten times the fatal dose of the respective toxin. This is indeed a tedious, laborious, expensive and not absolutely uniform means of pronouncing on the exact strength of a given serum, but it is the only means available; there is no other, as no chemist pretends that he can test a parcel of antitoxin with his reagents. Every word of this applies with almost equal force to the testing of a limited number of powerful and important drugs like ergot, digitalis, squill, convallaria majalis, cannabis indica and strophanthus. The chemical test for these drugs and their pharmaceutic preparations is very unreliable, and unless they are tested by the pharmacologist, on the living animal, their administration is a lottery affording no guarantee of prompt reaction or final cure. This fact is notoriously the cause of that unfortunate desuetude into which ergot and cannabis indica have largely fallen. Lacking uniformity of action and failing often to yield the expected results, the pharmaceutic preparations of the markets are discarded wholly by the disappointed practitioner. Professor Hare, in his "Therapeutics," ascribes the frequent failure of cannabis indica to the inferiority of the preparations encountered, and the worthlessness of much of the ergot on the market is beyond dispute. Witness also the report of Houghton[1], who pharmacologically tested six samples "supposed to be pure strophanthin:" one sample was *ninety* times as strong as another, and the remaining four varied between these limits of one and ninety.

If drug preparations can be made uniform in strength by the comparatively simple and inexpensive means of chemical assay, well and good, otherwise the physician has a right to ask the wealthy and prosperous manufacturer to apply the physiologic test to preparations whose activity can be gauged in no other manner.

HARMONY.

If there was one characteristic of the recent meeting of the AMERICAN MEDICAL ASSOCIATION more prominent than another, it was that of harmony and good feeling. As a consequence this occasion was one of profit to those present as well as to those absent. In this there was shown the great value of organization. All of the parts representing a great, living, active, working body were there engaged in the legitimate functions of the work to which each was individually assigned. Friction and discord were not only not observable, but were not present. All this shows that the physicians are getting together, and in doing so, constitute not only a grand, but a great army.

Scientific demonstrations either prove or disapprove theories, and are fatal to dogmas; and as dogmas melt and pass into mist, there comes a harmonious adjustment of forces. The unification and unanimous expression of a great body of scientific men has an educational as well as a psychic influence on the people, which in turn is reflected in its power on the national or state goverment.

A few physicians of Philadelphia got together and formulated a series of suggestions looking to improvement in the medical service of the army. Alone, they were a feeble force, but with a unanimous endorsement of their plans by the AMERICAN MEDICAL ASSOCIATION, they be

[1] Journal, Oct. 22, 1898.

came great and potent and their suggestions will receive consideration.

The hypercritical members of the profession who have held aloof from the organization, ominously uttering doubts as to the highly scientific character of the work done by it, are gradually coming into the ASSOCIATION. There are still many who do not feel like associating themselves with the national body, but their reasons for this become less defined each year, and ere long, it is to be hoped by all, they will forget the antagonisms of years gone by. Every one has a profound respect for certain societies which have refrained from sending delegates to the ASSOCIATION. Those organizations, segregated as they are, exert a limited influence, but if they should become a component part of the great national organization, their influence would at once become more powerful and far-reaching.

The harmony of the Columbus meeting with its well-organized scientific demonstrations and discussions will have an influence in drawing together the factors which have so long been separated from the organization with which they have a natural identification. In the harmony of the late meeting will be found the magnet that will, it is hoped, draw together and unify the entire profession. Such a unification means a wonderful power for good; a power that will present to Congress and to the President suggestions which will not go unheeded; a power that will be recognized when it goes to the state legislatures in the interests of state medicine, and protection from mountebanks and charlatans. Harmony and united action are unseen but powerful agents for good and should be cultivated so that greater benefits may yet flow to the profession as well as to the people.

DEGENERATION.

We are afraid that the *British Medical Journal* is allowing "commercialism" to get the better of its professional rectitude. It does not seem to be satisfied with the income resulting from having two advertising pages to one reading page—68 reading to 128 advertising—but it has now begun to place advertising inserts among its reading matter. These are filled with advertisements of water as well as whisky, surgical instruments and proprietary medicines. We feel shocked at the evident decadence of the ethical and professional morals of our quondam dignified and correct contemporary. The staid organ of the British Medical Association sacrificing its dignity thus, just for a few "bob" is certainly a state of affairs not pleasant to contemplate. When this great weekly, which is supposed to represent, and be the quintessence of, journalistic purity, sets such an example, what may be expected from others?

A MATTER OF PRIORITY.

In the *Neurologische Centralblatt* of June 1, Professor Mingazzini of Rome makes a claim for a compatriot of his, the late Dr. Galassi, of the original discovery of the pulmonary phenomena described by Dr. Gifford in 1895 and rediscovered by Westphal this year. It appears Dr. Galassi's observations were verbally reported to the Lancisi Society in Rome in 1887, and mentioned in its "Bulletin" in 1887 and 1888. It would seem from this that the "question of priority" editorially noticed in our issue of April 15, should, as far as the clinical observations and medical publication of the fact in society proceedings go, be settled in favor of the Italian observer. It happens, however, that the actual originality of the observation does not even rest here, for very soon after the appearance of Westphal's article Piltz[1] called attention to the fact that it had been noted by Wundt in his "Grundzuge der Physiologische Psychologie," published in 1880. Verily, as the wisest of men says, "there is nothing new under the sun."

THE TUBERCULOUS OSCULATION.

By following the rule of going away from home to get the news, we learn from one of our English contemporaries that "it has been found necessary in some parts of the United States to direct the attention of the legislatures to the desirability of prohibiting indiscriminate kissing, not, it would appear, in the interests of public morality or in deference to the susceptibility of the American Mrs. Grundy, but with a view of checking the spread of tuberculosis." The journal goes on to say that either the tubercle bacillus must possess unaccustomed virulence in the Western hemisphere or else kissing must be unduly and indeed unnecessarily prolonged. We have read somewhere a saying, apparently English in origin, that a thorough and complete kiss must last seven minutes by Shrewsbury clock, but have not heard of this being put in practice in this country. It is certain, however, as our English contemporary remarks, it will be one thing to prohibit indiscriminate kissing and another to enforce the veto, and we certainly agree with it that it is a lack of good taste to couple kissing and spitting together as nuisances, as it credits the American tuberculophobists with doing. It is to be feared, however, that it has been imposed on in this instance. If kissing has to be sacrificed for the sake of getting rid of tuberculosis, we opine that the latter will stay.

FOOD VALUE OF ALCOHOL.

The recent statements of the public press concerning the findings of Professor Atwater, the Government food expert, regarding the nutritive value of alcohol, are worthy of a passing notice. While some authorities have disputed it, the consensus of scientific opinion has always been that a certain amount of alcohol could be consumed in the body. Professor Atwater's findings are different from those of others only in that he finds a little larger quantity can be disposed of than some other hygienic authorities. He does not say that it is a healthful food or that it can be safely taken in a quantity sufficient to have any large effect in keeping the vital mechanism going. While it may be to some extent a producer of energy, its action even in small quantities, on special portions of the organism, may be deleterious. The experiments of Aschaffenburg in Kræpelin's clinic are in point as to this effect. He found that even a very moderate dose of alcohol—20 to 30 grams—had a distinctly bad effect on skilled workmen, type-setters, im-

[1] Neurologische Cbl., No. 6, March 15.

pairing their capacity to work to a very considerable extent. Then we have the question of idiosyncrasy to meet. It is well known that small quantities of alcohol are very ill borne by some individuals and we cannot estimate even the food quality of alcohol in the average man by experiments on one or two. After all the question of the food value of alcohol is of infinitesimal importance. It matters very little whether two ounces of alcohol can be disposed of in the system or not when it is estimated that as a food they are not more than the equivalent to two ounces of milk or broth. The temperance reformers have overshot the mark in dwelling on this point. Alcohol is not taken as a food; it is taken for its action on the nervous system, which is altogether a different thing.

DOCTORATES IN LAW FROM A MEDICAL COLLEGE.

The *Medical Press and Circular* criticizes the action of the Jefferson Medical College for having conferred the non-medical degree of Doctor of Laws. It speaks, however, "with bated breath" in view of similar practices of English Universities which are in the habit of giving the degree of Doctor of Civil Law in a country where the civil law has never been in vogue, to individuals who cannot by any strain of the imagination be presumed to know anything about it. Its criticism is, however, well founded except perhaps in that it ignores the accepted fiction which long custom has consecrated. It would be no harm, nevertheless, if our institutions that have as their legitimate function the giving out of doctorates that mean something would cease the practice of bestowing those that mean nothing but an empty compliment. A degree in law from a medical college is not worth much and is unfair as not in accordance with true reciprocity. A degree in medicine from a law college in Philadelphia would, to use a common expression, certainly cause a "kick."

HUMAN TUBERCULOSIS AND HOUSEHOLD PETS.

The claim has frequently been made that children often become infected with certain diseases which are brought to them from other children by pet animals, such as cats and dogs, or indeed, that these animals may themselves be suffering from maladies which are capable of transmission to the human being, but while many physicians believe in the truth of these assertions, definite evidence has not yet been largely accumulated. It is also a known fact that some pet animals and birds are susceptible to tuberculosis, and while in the case of birds the bacillus is somewhat different from that which occurs in the human body, it has been supposed that this difference is simply produced by its surroundings, and that it is capable under certain circumstances of affecting human beings. Our attention has been called to this matter by an article by Tucker Wise, in which he brings forward certain evidence to prove that canary birds in particular are capable of spreading tubercular infection. He believes from his experience and literary research that tuberculosis among caged birds is an exceedingly common disease, and he points out how the fluttering of the wings of the bird distributes infected dust in the air of the room and thereby spreads tubercular infection. Altogether he has collected thirty cases of tuberculosis, which, in his opinion, were closely connected with infection from such pets, and he goes on to point out that in the distribution of the dust in the manner described, it may not only be inhaled from the dust of the room, but also infect various articles of food which are frequently put on tables in the neighborhood of bird cages. He also points out that it is estimated that nearly 400,000 canaries are sold every year in Great Britain, and therefore that this question of bird tuberculosis and human tuberculosis may possess a greater degree of interest than has been thought.

DIAGNOSIS OF TRICHINOSIS.

Atkinson has added another to the cases made famous by the reports of Osler, Cabot and Brown; the great increase in the proportion of eosinophilic cells in cases known to be actively infected with the trichinæ. Normally these cells show a wide variation within their normal limits, from one-third of 1 per cent. to 3 per cent., yet even at the greatest they occur less frequently than any other form of white cell. In the cases of these observers the differential count has demonstrated over 50 per cent. of the leucocytes to be of the eosinophilic variety during the stage of active infection. Nor is it possible to mistake this cell for any other when the specimen, fixed by heat or in equal parts of alcohol and ether, is stained even most carelessly with the eosin and methyl blue of the Erlich triple stain, preferably the former. the intense pink with which the large spherical granules take the eosin stain, the polymorphous nucleus, the pallor of the latter even when long stained, its loose connection with the granules, all tend to make it distinctive. While this large increase may be looked on almost as pathognomonic, eosinophilia of moderate grade may occur in a vast number of other affections; in diseases of bone the writer has seen 5 per cent. of eosinophiles in sarcomatosis of the bone; in diseases of the skin, Cabot has reported a case of dermatitis herpetiformis in which the differential count of 500 leucocytes showed 19 per cent. of eosinophilia—in diseases of the spleen, of the organs of generation, of the sympathetic system, and in cases of the so-called uric acid diathesis. But there are other symptoms to be taken into consideration than this eosinophilia in making the diagnosis of trichinosis. The onset is as a rule sudden, with a chill, rigor, rapid rise of temperature, followed by profuse sweating. Intense itching pains in the limbs follow and the patients can hardly move without suffering the most intense agony. These pains are not of the aching variety common to typhoid fever, smallpox and influenza, but more of the rheumatic type. They are due to the myositis set up by the growth of the trichinæ. The history of a case one might easily mistake for typhoid, but there are no rose spots, no enlargement of the spleen, no abdominal tenderness, pain, or tympanites; while, on the other hand, the Widal reaction is absent, and there is always a marked leucocytosis. One of the common symptoms to which little attention has been paid is edema of the eyelids without swelling of the feet and without albuminuria and the presence of urinary casts. A careful history will often elicit information of the patients having eaten raw meat. The case of Atkinson was remarkable in this respect; the man was a cook in a restau-

rant, with the greatest love for raw meats of all kinds, fish, sausage, and would eat it by handfuls. This latter case pursued a rather uneventful course and was discharged in a little over a month, in good condition. During his stay in the hospital, portions of muscle were excised and the diagnosis conclusively proven by finding the trichinæ among the muscular fibers. This case also illustrates the value of routine examination of blood films in hospital practice. Possibly had this not been done the diagnosis would not have been made. It may not have made any difference as far as the actual progress and recovery of the patient was concerned, still it is a part of every scientific and progressive physician to leave no stone unturned that might aid him in establishing his diagnosis.

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PROGNOSIS IN VALVULAR HEART DISEASE.

In some clinics of the larger hospitals it is a matter of almost daily occurrence to have patients present themselves with a history of failing health, slight exhaustion, sometimes dimness of vision, dizziness, and above all a painful spot in the region of the left nipple. In many cases, if not in the majority, there may not be leading symptoms which would lead one to believe that the patient was suffering from valvular disease of the heart. If one symptom is present in the early stage which predominates over the others, it would seem to be the pain in the region of the left nipple. In some cases this pain may be of a dull or dragging character, but as a rule it is rather sharp and more or less persistent without reference to the time of eating. In such patients the heart should at once be examined. We often meet with such cases in the dispensaries. The patient presents himself, thinking his ailment is of a trivial character, but on being requested to have an examination made, his attention is at once drawn to the heart by the physician's manipulations, and one of the first questions asked is, "Doctor, have I heart disease?" Heart disease to most patients means an incurable disease, and one in which the imagination is at its highest tension from fear of sudden and early death. It is not always easy to make reply to this direct question, and in many cases, if not the most of them, it is best not to do so. There are few patients who, when told that a valvular lesion exists, bear it well. In this condition it is really not diagnosis that the patient is thinking about, but prognosis. The words "heart disease," "early" and "sudden death," are constantly being turned over in his mind. In the clinics, where the patients are generally strangers, it is best not to tell the patient that he has heart disease. In nearly all cases it does harm. The most of them are laboring under a feeling of despondency from being out of work, family cares, or indigestion, and why should we add to their discomfort? In such cases it seems best to ask them to return again, and then again, after which time a better opportunity will have been gained of the person's characteristics. Further, the physician will be more competent to pass judgment on a case at the third examination than at the first one. He may see cause to change the original diagnosis. If he should tell the patient that the diagnosis had been changed it would cause a doubt to exist, and moreover a loss of confidence. The physician may and should be ready to acknowledge his mistake, but not always to the patient. That is another reason why a hasty diagnosis does mischief. It requires an expert of a high degree to differentiate the different varieties of heart murmurs at the first examination. If we should hear a murmur at the apex or at the base of the heart, that does not always mean that heart disease is present. A murmur situated in either region has been known to pass away. One celebrated writer states that: "With an apex-beat in the normal situation and regular in rhythm, the auscultatory phenomena may be practically disregarded." The prognosis, speaking generally, does not depend on the heart

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THIS year the Metropolitan Hospital Sunday Fund, London, received a check for £10,000, about $50,000, from Mr. George Herring.

THE PROFESSOR of chemistry, Dr. Istrate of Bukharest, has been appointed a member of the Roumania Cabinet, as Minister of Public Works.

SIR WILLIAM MACCORMAC of London has been elected an honorary president of the Thirteenth International Congress of Medicine to be held in Paris August 2-9, 1900.

THE FAITH HEALER, under whose treatment Dora Kraray, a child of Brooklyn, suffered from gangrene of the foot, making amputation necessary, has been sentenced to five year's imprisonment.

DR. J. B. ALEXANDER of Hiawatha, Kan., has been elected president of the Kansas State Board of Health and Dr. W. B. Swan of Topeka, secretary.

BY THE will of Charlotte Bostwick, Philadelphia, a contingent bequest of $15,000 has been made the Germantown (Pa.) Dispensary and Hospital, to be added to the endowment fund of that institution.

DR. MARTIN MENDELSSOHN of Berlin was made "professor" on the occasion of the opening of the Sick Nursing Exhibition at Berlin, which he had arranged with special reference to the Tuberculosis Congress.

DR. J. ACKERMAN COLES of Scotch Plains, N. J., has presented to Brown University a life-size portrait bust of Benjamin Franklin, a replica of the one made in Paris, in 1778, while Franklin was minister at the Court of France.

A CONVALESCENTS' home for soldiers returned from the colonies has recently been opened at Sevres, near Paris, in the chateau occupied by Mme. de Pompadour, under the auspices of the association for the assistance of "militaires coloniaux."

DR. JUR. M. MORIARTA, Counsellor and Minister de l'Interieur at Tokio, Japan, has been detailed by the Mikado to study the question of sanitation in the United States and is now in Philadelphia examining the method in vogue by that city's Board of Health relative to keeping the sanitary record and health statistics.

ABOUT three hundred and eighty candidates for license to practice medicine just appeared before the State Board of Medical Examiners in Philadelphia. Of this number about three hundred and twenty-five are regulars. About one hundred will be examined in Pittsburg.

THE PARIS *Gazette Medicale* states that several physicians of Cologne and the Rhine countries have been arrested for selling pills to young men, which produced symptoms simulating heart disease, and thus secured their exemption from military service. The death of one who had taken too many pills led to the discovery of the trick.

THE FRENCH naval medical officer, Dr. Emily, who accompanied the Marchand scientific mission which made its way this year from the Congo to the Red Sea, has been dined and wined by the profession in France on his recent return. This is his third expedition to Darkest Africa although he is not yet quite 34 years of age. His works on natural history have attracted much attention.

AMONG THE paintings at the Paris Salon this year two medical subjects have attracted considerable attention. One, "A Consultation at the Hospital Paschal," represents Dr. Brocq examining the back of a young woman who stands picturesquely draped before him, with a number of internes in their gowns and several visiting physicians, all portraits. No lesson is perceptible. "The Accident" shows the physician summoned to the circus rider on a couch in the flies, with the clowns and musicians crowding around her and keeping back the gaping public. Still another "Accident" is a scene of a workman being carried past on a litter, the passers-by removing their hats, except one stylishly dressed man who is accosted by one of the workman, his words the title of the painting: "Hats off! Salute Labor's Wounded!" The physician is seen mounting the hospital steps in the distance.

SMALLPOX diagnosed as chickenpox at Valparaiso, Ind., has exposed that community for the past three months. The disease was conveyed from Mississippi by a student of the Northern Indiana Normal School, who was taken ill on his arrival in March. On account of the mildness of the attack and the prevalence of chickenpox the case was thought to be of the latter disease and after three days the student was allowed to attend his classes. It was observed that the subsequent cases developed in those who had not been vaccinated. Drs. Herman Spalding, chief medical inspector of the Chicago Health Department and A. W. Brayton of the Indiana State Board of Health, being ordered to make an inspection, at once pronounced the cases smallpox. There have been thirteen cases up to the present time, as nearly as can be ascertained. The vaccination of the community, the fumigation of infected houses and the prompt isolation of suspicious cases was immediately ordered. With these rules effectively enforced the authorities do not entertain fears of a general epidemic on the return of cold weather.

THE STEAMER *Nippon Maru*, from Hongkong via Yokohama and Honolulu, arrived at San Francisco June 27, having been detained at Honolulu several days in quarantine on account of two deaths which occurred on the voyage, from bubonic plague. One of these deaths occurred three days before reaching Honolulu, in the case of a Chinese steerage passenger. The ship's

rant, with the greatest love for raw meats of all kinds, fish, sausage, and would eat it by handfuls. This latter case pursued a rather uneventful course and was discharged in a little over a month, in good condition. During his stay in the hospital, portions of muscle were excised and the diagnosis conclusively proven by finding the trichinæ among the muscular fibers. This case also illustrates the value of routine examination of blood films in hospital practice. Possibly had this not been done the diagnosis would not have been made. It may not have made any difference as far as the actual progress and recovery of the patient was concerned, still it is a part of every scientific and progressive physician to leave no stone unturned that might aid him in establishing his diagnosis.

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DR. HARRY FRIEDENWALD, Baltimore, has returned from a four months' tour of European hospitals.

THIS year the Metropolitan Hospital Sunday Fund, London, received a check for £10,000, about $50,000, from Mr. George Herring.

THE PROFESSOR of chemistry, Dr. Istrate of Bukharest, has been appointed a member of the Roumania Cabinet, as Minister of Public Works.

SIR WILLIAM MACCORMAC of London has been elected an honorary president of the Thirteenth International Congress of Medicine to be held in Paris August 2-9, 1900.

THE FAITH HEALER, under whose treatment Dora Kraray, a child of Brooklyn, suffered from gangrene of the foot, making amputation necessary, has been sentenced to five year's imprisonment.

DR. J. B. ALEXANDER of Hiawatha, Kan., has been elected president of the Kansas State Board of Health and Dr. W. B. Swan of Topeka, secretary.

BY THE will of Charlotte Bostwick, Philadelphia, a contingent bequest of $15,000 has been made the Germantown (Pa.) Dispensary and Hospital, to be added to the endowment fund of that institution.

DR. MARTIN MENDELSSOHN of Berlin was made "professor" on the occasion of the opening of the Sick Nursing Exhibition at Berlin, which he had arranged with special reference to the Tuberculosis Congress.

DR. J. ACKERMAN COLES of Scotch Plains, N. J., has presented to Brown University a life-size portrait bust of Benjamin Franklin, a replica of the one made in Paris, in 1778, while Franklin was minister at the Court of France.

A CONVALESCENTS' home for soldiers returned from the colonies has recently been opened at Sevres, near Paris, in the chateau occupied by Mme. de Pompadour, under the auspices of the association for the assistance of "militaires coloniaux."

DR. JUR. M. MORIARTA, Counsellor and Minister de l'Interieur at Tokio, Japan, has been detailed by the Mikado to study the question of sanitation in the United States and is now in Philadelphia examining the method in vogue by that city's Board of Health relative to keeping the sanitary record and health statistics.

ABOUT three hundred and eighty candidates for license to practice medicine just appeared before the State Board of Medical Examiners in Philadelphia. Of this number about three hundred and twenty-five are regulars. About one hundred will be examined in Pittsburg.

THE PARIS *Gazette Medicale* states that several physicians of Cologne and the Rhine countries have been arrested for selling pills to young men, which produced symptoms simulating heart disease, and thus secured their exemption from military service. The death of one who had taken too many pills led to the discovery of the trick.

THE FRENCH naval medical officer, Dr. Emily, who accompanied the Marchand scientific mission which made its way this year from the Congo to the Red Sea, has been dined and wined by the profession in France on his recent return. This is his third expedition to Darkest Africa although he is not yet quite 34 years of age. His works on natural history have attracted much attention.

AMONG THE paintings at the Paris Salon this year two medical subjects have attracted considerable attention. One, "A Consultation at the Hospital Paschal," represents Dr. Brocq examining the back of a young woman who stands picturesquely draped before him, with a number of internes in their gowns and several visiting physicians, all portraits. No lesson is perceptible. "The Accident" shows the physician summoned to the circus rider on a couch in the flies, with the clowns and musicians crowding around her and keeping back the gaping public. Still another "Accident" is a scene of a workman being carried past on a litter, the passers-by removing their hats, except one stylishly dressed man who is accosted by one of the workman, his words the title of the painting: "Hats off! Salute Labor's Wounded!" The physician is seen mounting the hospital steps in the distance.

SMALLPOX diagnosed as chickenpox at Valparaiso, Ind., has exposed that community for the past three months. The disease was conveyed from Mississippi by a student of the Northern Indiana Normal School, who was taken ill on his arrival in March. On account of the mildness of the attack and the prevalence of chickenpox the case was thought to be of the latter disease and after three days the student was allowed to attend his classes. It was observed that the subsequent cases developed in those who had not been vaccinated. Drs. Herman Spalding, chief medical inspector of the Chicago Health Department and A. W. Brayton of the Indiana State Board of Health, being ordered to make an inspection, at once pronounced the cases smallpox. There have been thirteen cases up to the present time, as nearly as can be ascertained. The vaccination of the community, the fumigation of infected houses and the prompt isolation of suspicious cases was immediately ordered. With these rules effectively enforced the authorities do not entertain fears of a general epidemic on the return of cold weather.

THE STEAMER *Nippon Maru*, from Hongkong via Yokohama and Honolulu, arrived at San Francisco June 27, having been detained at Honolulu several days in quarantine on account of two deaths which occurred on the voyage, from bubonic plague. One of these deaths occurred three days before reaching Honolulu, in the case of a Chinese steerage passenger. The ship's

doctor at first made a diagnosis of uremic poisoning, but being suspicious preserved the body for bacteriologic examination, which resulted in the discovery of the bacillus of the bubonic disease. The body was, therefore, cremated, and the vessel ordered into quarantine at Honolulu as above. The steamer arrived at San Francisco with the yellow flag flying and was at once ordered to the quarantine station, all the passengers being landed on Angel Island and neither doctors nor custom officers being allowed on board. Certain important papers were fumigated and sent on shore, but the *Maru* will be kept in quarantine for several weeks. She carried fifty-five cabin passengers, of which six are Europeans, while there are 138 Japanese and Chinese steerage passengers.

HEALTH REPORTS IN SOUTH AMERICA.—The reports of the National Institute of Hygiene in Chile, of the boards of health in Mexico, Brazil, etc., are accumulating a mine of information for future statisticians with their comprehensive, detailed, tabulated reports of hygienic, demographic and meteorologic conditions. When the countries undertook this work they had no established routine to overcome and could adopt from the start the latest and most approved methods in vogue, with the result that their stately volumes are models in every respect, and in their monthly bulletins they produce in popular form the prophylactic and other measures recommended by the highest authorities of all countries, devoting especial attention to tuberculosis, yellow fever, infant hygiene and the sanitation of cities.

Therapeutics.

SIMPLE SUMMER DIARRHEA.

Food of all kinds should be stopped for twelve to twenty-four hours, and no milk given for several days. The intestinal canal should be cleared of all undigested food by full doses of castor-oil or syrup of rhubarb, preferably the former. Should there be excessive peristalsis attended with pain, camphorated tincture of opium may be given, in doses of 5 to 10 minims (.3-.6 c.c.) to a child 1 year of age, which may be followed by some simple sedative intestinal antiseptic, such as bismuth subnitrate.

The following prescriptions are recommended:

℞ Bismuthi subgallici . . . . . ʒi (3.88 gm.)
Sodii bicarbonatis . . . . . gr. v. (.3 gm.)
Cretæ preparatæ . . . . . ʒss. (1.94 gm.)
Creosoti . . . . . gtt. v. (.3 c.c.)
Syrupi cinnamoni . . . . . ʒss. (1.84 c.c.)
Aquæ distillatæ q.s. ad . . . . . ʒiv (118.2 c.c.

M. Sig.: Teaspoonful after each movement. *Griffin.*

℞ Iodoformi . . . . . gr. iii. (.19 gm.)
Naphtalini . . . . . gr. xv (.97 gm.)
Pulveris sacchari . . . . . ʒiiss (9.7 gm.)
Olii bergamii . . . . . gtt ii (.12 c.c.)

M. ft. chart No. xx.

Sig.: One in milk every hour in severe forms. *Comby.*

℞ Zinci sulphocarbolatis . . . . . gr. v (.32 gm.)
Benzosol . . . . . gr. viii (.51 gm.)
Bismuthi subnitratis . . . . . ʒss (1.94 gm.)
Hydrargyri chloridi mitis . . . . gr. ss. (.03 gm.)

M. ft. chart x.

Sig.: One powder every one or two hours. For a child 2 or 3 years of age.

DIARRHEA INCIDENT ON TEETHING.

℞ Acidi sulphurici diluti . . . . . m.viii (.51 gm.)
Tincturæ opii camphoratæ . . . . ʒi (3.7 c.c.)
Spiritus vini gallici
Syrupi zingiberis . . . . . āā ʒiii (11 c.c.)
Aquæ menthæ piperatæ q. s. ad . . . ʒii (59. c.c.)

M. Sig.: Teaspoonful every three hours if necessary.
Geo. F. Butler, M.D.

FETID DIARRHEA OF INITIAL STAGE OF SCARLATINA.

Filatov recommends the following:

℞ Magnesii sulphatis . . . . . ʒi (3.88 gm.)
Acidi sulphurici. . . . . ʒi (3.7 c.c.)
Aquæ distillatæ . . . . . ʒvi (177.4 cc.)
Syrupi. . . . . ʒi (30 c.c.)

M. Sig. A teaspoonful or tablespoonful, according to the child's age, from hour to hour.

This draught is markedly anodyne, and is well taken by little children.

ACUTE GASTRO-ENTERIC INFECTIONS.

Grosch prescribes the following for patients suffering from acute infectious gastro-enteritis accompanied by vomiting, purulent dejecta, pains in the head, limbs, etc.:

℞ Tincturæ iodi . . . . . m xv (0.92 c.c.)
Syrupi simplicis . . . . . ʒv (18.5 c.c.)
Aquæ distillatæ, ad . . . . . ʒv (148.0 c.c.)

M. Sig. One tablespoonful every one or two hours, or three times daily, according to the gravity of the disease.

GASTRO INTESTINAL INTOXICATION OF INFANTS.

According to the *N. Y. Med. Jour.*, Perrier recommends in light forms unaccompanied by general phenomena such as vomiting, diarrhea, tumid abdomen, stationary or diminished weight, the suspension of milk, substituting for it boiled water, or slightly alkaline water, rice water, barley water, etc. The following prescription should be given:

℞ Benzonaphthol . . . . gr. ivss–ix (0.28–0.58 gm.)
Bismuthi salicylatis . . . gr. ix–xv (0.58–0.97 gm.)
Syrupi aurantii flor. . . . . ʒi (30 c.c.)
Mucilag. acaciæ . . . . . ʒxxss (84.34 c.c.

M. Sig. One tablespoonful every two hours.

If the dejecta are fetid, infrequent, and if there is tympanitis give:

℞ Hydrargyri chloridi mitis . gr. ¾–iss (.04–.09 gm.)
Sacchari lactis . . . . . gr. ss (.03 gm.)

In those forms in which to the before-mentioned symptoms are added fever, fetid breath, foul tongue, thirst and a loss of weight, milk should always be suspended, water alone being given. Gastric and intestinal lavage with boiled water, or a 0.7 per cent. saline fluid should be practiced; warm moist compresses should be applied to the abdomen, and if there is hypothermia, hot baths should be given, while tepid or cool baths should be used with hypothermia. About one fluid ounce (30 c.c.) of artificial serum should also be injected every three or four hours.

ACUTE DYSENTERRY.

This disease has been treated with enemas containing sulphate of copper, under the directions of Sandwith, quite successfully. He directs that the patient should remain in bed with flannel over the abdomen, and be on a diet of boiled milk, rice water and seltzer, plus a little whisky. A dose of bismuth salicylate, 15 grains (.97 gm.), is given every four hours. The intestine is washed out daily with a quart of boric acid and starch solution, and for a few days, daily rectal injections are given with the following mixture:

℞. Cupri sulphatis . . . . . gr. xv (.97 gm.)
Tincturæ opii . . . . . m. xv (.92 c.c.)
Amyli. . . . . ʒi (31 gm.)
Aquæ . . . . . ʒviii—Oii (236.5—946.3 c.c.)

Sig.: For one rectal injection. A cocain suppository may be inserted afterward if indicated.

The following prescriptions have been recommended:

℞. Extracti ergotæ fluidi . . . . . ʒiiss (75 c.c.)
Tincturæ opii deodoratæ . . . . . ʒss (15 c.c.)

M. Sig.: Teaspoonful three times daily; or

℞. Ergotinæ (or aq. ex.) . . . . . gr. xx (1.29 gm.)
Extracti nucis vomicæ . . . . . gr. v (.32 gm.)
Extracti opii . . . . . gr. v (.32 gm.)

M. ft. pil No. xx.

Sig.: One every four or six hours. *Bartholow.*

℞. Magnesii sulphatis . . . . . gr. xl (2.59 gm.)
Tincturæ opii deodoratæ . . . . . gtt. v (.3 c.c.)
Syrupi limonis . . . . . ʒss (1.8 c.c.)
Aquæ q.s. ad. . . . . ʒii (7.39 c.c.)

M. Sig.: For one dose. Give every hour until stools change in character to feculence; then every two hours.

Bose and Bedel recommend in grave cases large intravenous injections of a 7 to 1000 saline solution. They should be administered at a comparatively early stage of the disease, and should be repeated. Each time a quantity of liquid varying from 34 (1000 c.c.) to 70 fluid ounces (1800 c.c.) is to be employed, 2 (59.14 c.c.) to 4 fluid ounces (118.29 c.c.) being injected per minute.

H. C. Wood says: "In acute dysentery involving the colon high up, I have found large enemata, containing two or three drachms of subnitrate of bismuth, much more efficient than the exhibition of bismuth by the mouth."

Brayton Ball advises "hot enemata of tannin and boric acid. When the stools have become diarrheal in character bismuth in large doses. Large enemata of warm or ice-cold water under low hydrostatic pressure."

Testevin has successfully used the following:

℞ Creosoti (beechwood) . . . . . gr. xv. (.97 gm.)
Tincturæ opii . . . . . gtt. x. (.6 c.c.)
Lactis (bullientis) . . . . . ℥v. (18.5 cc.)
Aquæ (bullientis) . . . . . ℥viss (192.4 c.c.)
M. Sig. Inject while hot, into the colon, after irrigating the rectum with a solution of boric acid and salicylic acid. (Thiersch's.)

"Irrigations with silver nitrate, from 20 to 30 grains (1.3 2 gm.) to the pint (500 c.c.) are especially useful," says W. W. Johnston," when the presence of pus in the discharges shows the persistence of unhealed ulcers. If these ulcers are in the rectum (and an examination ought always to be made to see if this is the case), they may be touched through a speculum with a strong solution of silver nitrate or with carbolic acid."

CHOLERA MORBUS.

Mistura anticholeraica—"Sun Mixture":

℞ Tincturæ opii.
Tincturæ capsici.
Tincturæ rhei.
Spiritus camphoræ.
Spiritus menthæ piperitæ ää . . . . ℥iv (15 c.c.)
M. Sig.: Dose twenty to sixty minims (1.2 to 3.7 c.c.)

Thompson's modification of "Hope's Camphor Mixture.

℞ Acidi nitrici diluti . . . . . ℥ii (7.39 c.c.)
Spiritus camphoræ
Tincture opii ää . . . . . ℥i (3.7 c.c.)
Syrupi zingiberis . . . . . ℥iv (15 c.c.)
Aquæ menthæ piperitæ ad. . . . . ℥vi (177 c.c.)
M. Sig. Teaspoonful as a dose.

F. A. Packard recommends the following prescription in cholera morbus to restore the mucous membrane to a normal condition:

℞ Hydrargyri chloridi mitis . . . . gr. 1/12 (.005 gm.)
Pulveris aromatici. . . . . gr. ii (.12 gm.)
Extracti pancreatici . . . . . gr. v (.32 gm.)
Bismuthi subnitratis . . . . . gr. x (.64 gm.)
M. ft. cht. No. 1. Sig.: Take every three hours.

TO ALLAY VOMITING IN CHOLERA MORBIS.

℞ Creosoti
Acidi hydrocyanici dilutii ää . . . . . m ii (.12 c.c.)
Mucilag acaciæ . . . . . ℥ss (1.84 c.c.)
Aquæ q.s. ad . . . . . ℥i (30 c.c.)
M. Sig.: Take at one dose.

SQUIBBS CHOLERA MIXTURE.

℞ Tincturæ opii
Tincturæ capsici
Spiritus camphoræ ää . . . . . ℥i (3.7 c.c.)
Chloroformi . . . . . ℥iii (11 c.c.)
Alcoholis. qs. ad . . . . . ℥i (18.5 c.c.)
M. Sig.: Twenty to forty minims (1.2 to 2 4 c.c. p. r. n.).

For children suffering from cholera infantum, F. Percy Elliott gives at the onset:

℞ Olei ricini . . . . . ℥ss to ℥i (1.8 to 3.7 c.c.
Spiritus menthæ piperitæ . m i to m ii (.06 to .12 cc.)
M. Sig.: Give in hot milk.

For collapse:

℞ Beef tea . . . . . ℥ii (60 c.c.)
Brandy . . . . . ℥ii (7.39 c.c.)
By enema followed by warm bath.

"If serious, ether or aromatic spirit of ammonia, by hypodermatic injection or rectal injection of starch and warm water. Broths (mutton, beef, veal) are better than peptonized milk; or give no food for twelve or twenty-four hours (occasional sips of hot water). Rub chest and abdomen with whisky and water, and wrap in cotton wool or flannel."

In urgent cases Lesage advises injecting into the subcutaneous tissue, one ounce (40 c.c.) of the following solution, making from three to six injections a day.

℞ Sodii sulphatis . . . . . ℥iiss (9.72 gm)
Sodii chloridi . . . . . ℥i (3 88 gm)
Aquæ distillæ . . . . . ℥xxxiii (1000 c.c.)

TO ARREST VOMITING AND PURGING.

℞ Bismuthi subnitratis . . . . ℥ss–iss (1.94–5.8 gm.
Spiritus myristicæ . . . . . mxx (1.2 c.c.)
Spiritus vini gallici . . . . . ℥iii (11 c.c.)
Syrupi acaciæ . . . . . ℥iss (45 c.c.)
Aquæ cinnamoni q. s. ad. . . . . ℥iii (89 c.c.)
M. Sig. Teaspoonful every two hours. *Powell.*

℞ Hydrargyri chloridi mitis
Plumbi acetatis ää . . . . . gr i (.06 gm.)
M. Ft. pulv. No. iv. Sig. One powder every three hours for a child from ten to twenty months old.
T. D. Mitchell.

In treating these cases it is often necessary to irrigate the intestines. Langford Symes says: "First wash out the rectum, then irrigate high up, with a warm normal saline or boric acid solution, the douche can be raised eighteen inches."

CHOLERA INFANTUM AND THE NURSING BOTTLE.

The perils that surround the bottle fed baby are manifold. If a liquid reasonably resembling breast milk in composition and temperature is put into its bottle, it is still in danger of sucking in septic and possibly specific germs that have been lurking in the rubber appurtenances of the bottle. The abomination known as the Alexandra nursing-bottle, that familiar device for saving the nurse maid trouble, has commended itself to the unthinking for many years, and its use has even been upheld by some physicians who should have known better, although one would suppose that the dullest comprehension could not fail to perceive the impossibility of keeping it clean—clean in the ordinary sense of the word, not aseptic. Most physicians whose practice has been largely among children have, it is true, inveighed against it, but hardly any heed has been taken of their statements, perhaps because they were not clinched by indisputable demonstration. Such a demonstration seems now to have been made, and it is by no means the least of the services rendered by bacteriology. To Dr. Wende, the health officer of Buffalo, so far as our present information goes, is due the credit of having proved the agency of the "hose" bottle in causing cholera infantum.

The flexible external tube of the Alexandra bottle, as everybody knows, is made of soft rubber, a material which speedily becomes foul when kept in contact with impure liquids or those that readily decompose. Dr. Wende has shown that this tube, after having been in use for a little time, contains in the depths of the rubber, to say nothing of its inner surface, micro-organisms that even boiling does not destroy, as is proved by the ease with which cultures of them are grown. In consequence of Dr. Wende's demonstration the Buffalo Board of Health some time ago passed an ordinance forbidding the sale of the "hose" nursing bottle, and during the year or more that this enactment has been in force the cholera infantum mortality of Buffalo has been fifty per cent. less than before.

But this is not all. The elimination of the "hose" does not, of course, do away with all the dangers of bottle-feeding. Not only has the baby to be guarded against bad milk, but the micro-organisms lurking in soft rubber still pursue it. Dr. Wende finds that even the rubber nipple used when the "hose" is dispensed with soon becomes a nest for bacteria; so that in time even that must go, although it will have to be used, we presume, until a less objectionable form of nipple is devised. Dr. Wende finds that the nipples made of white rubber are

more readily infected than the black ones; therefore, so long as rubber nipples still have to be employed, the black ones are to be preferred. What is wanted now is a nipple combining something of the elasticity of soft rubber with the germ proof quality of glass. Celluloid has been suggested as a material that might be made to fulfil these requirements, and we see no reason why it should not if properly treated. Something must be invented to supersede the soft-rubber nipple.—*N. Y. Med. Jour.*, June 24.

Book Notices.

Atlas of Diseases of the Skin, including an Epitome of Pathology and Treatment. By PROF. DR. FRANZ MRACEK of Vienna. Authorized translation from the German. Edited by HENRY W. STELWAGON, M.D., Ph.D., clinical professor of dermatology, Jefferson Medical College, Philadelphia, etc. With 63 colored plates and 39 full-page half tone illustrations. Price $3.50 net. Cloth. Philadelphia: W. B. Saunders, 1899.

This is one of the series known as Saunders' Medical Hand-Atlases, of which the publisher claims to have contracted to sell 100,000 copies and thought it a large undertaking, but that now it will more probably amount to twice that number. If each of the series is as excellent as is this one, the statement can easily be believed. The importance of personal inspection of cases in the study of cutaneous diseases is readily appreciated, and next to the living subject are pictures which will show the appearance of the disease under consideration. To be of material advantage in skin diseases these must not be confined to black and white, but must be in colors and well executed. This is what we have in this atlas. The original cost of these plates must have been enormous, but since they are used to illustrate the book in so many different countries, and necessarily in such an enormous number, the original first cost is so divided and subdivided that it amounts to but little on each one. While pathology and treatment are well considered in the text, the great value and popularity of the book will depend on the aids to diagnosis by means of the excellent illustrations. A large number of well-selected prescriptions are given, and altogether the work will be found of very great value to the general practitioner in the treatment of skin diseases.

BOOKS AND PAMPHLETS RECEIVED.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

Transactions of American Association of Obstetricians and Gynecologists. Vol. xi. For the year 1898. Octavo. Cloth. Pp. 372. Philadelphia: Wm. J. Dornan. 1899.

Shall We Drink Wine?—A Physician's Study of the Alcohol Question. By Dr. JNO. MADDEN, professor of physiology in the Wisconsin College of Physicians and Surgeons. Octavo. Cloth. Pp. 220. Milwaukee: Press of Owen and Weihbrecht Co. 1899.

Hygiene of the Mouth.—Guide to the Prevention and Control of Dental Diseases. By R. DENISON PEDLEY, F.R.C.S., Ed., L.D.S., Eng. With numerous illustrations. 8vo. Cloth. Pp. 94. Price, 2/6. London: J. P. Legg & Co. Philadelphia: S. S. White Dental Mfg. Co.

Elements of Vital Statistics. By ARTHUR NEWSHOLME, M. D., Lond., F.R.C.P., examiner in state medicine to the University of London and preventive medicine in the University of Oxford, Etc. Third edition. Octavo. Cloth. Pp. 353. Price, $3. London: Swan Sonnenschein & Co., Ltd. New York: The Macmillan Co.

Class Book of (Elementary) Practical Physiology. Including Histology, Chemical and Experimental Physiology. By DE BURGH BIRCH, M.D., C.M., F.R.S.E., professor of physiology in the Yorkshire College of the Victoria University; examiner in Victoria University; additional examiner in Edinburgh University. Small octavo. Cloth. Pp. 273. Price, $1.75. Philadelphia: P. Blakiston's Son & Co. 1899.

Hay-Fever and Its Successful Treatment. By W. C. HOLLOPETER, A.M., M.D., clinical professor of pediatrics in the Medico-Chirurgical College of Philadelphia; physician to the Methodist Episcopal Hospital; pediatrist to the Medico-Chirurgical Hospital, to St. Joseph's Hospital; Fellow of the American Academy of Medicine, etc. Second edition. Revised and enlarged. Octavo. Cloth. Pp. 151. Price, $1. Philadelphia: P. Blakiston's Son & Co. 1899.

Atlas of Fractures and Dislocations. By Prof. Dr. H. HELFERICH of Greifswald. Translated from the third German edition by J. HUTCHINSON, JR., F.R.C.S. Sixty-eight superb chromo-lithographic plates with descriptions, and 130 pages of treatise, illustrated by 126 woodcuts. Wood's Series of Medical Hand Atlases. Muslin, $3, net. New York: Wm. Wood & Co. 1899.

Practical Diagnosis: The Use of Symptoms in the Diagnosis of Disease. By HOBART AMORY HARE, M.D., B.Sc., professor of therapeutics and materia medica in the Jefferson Medical College of Philadelphia. Fourth edition, enlarged and thoroughly revised. In one octavo volume of 623 pages, with 205 engravings and 14 full-page colored plates. Cloth, $5.00 net. Philadelphia and New York: Lea Brothers & Co. 1899.

Manual of Surgical Treatment: By W. WATSON CHEYNE, M.B., F. R. C. S., F. R. S., professor of surgery in King's College, London, surgeon to King's College Hospital, etc., and F. F. BURCHARD, M.D. and M S. (Lond.), F. R. C. S., teacher of practical surgery in King's College, (Lond.), surgeon to King's College Hospital, etc. In six imperial octavo volumes, with illustrations. Vol. i, 285 pages, with 66 illustrations Cloth $3.00 net. Philadelphia and New York: Lea Brothers & Co 1899.

Clinical Diagnosis: The Bacteriological, Chemical, and Microscopical Evidence of Disease. By Dr. RUDOLPH V. JAKSCH, professor of special pathology and therapeutics, and director of the medical clinic in the German University of Prague. Specially revised and enlarged by the author from the Third English Edition of the Translation by James Cagney, M.A., M.D Fourth Edition with numerous illustrations (partly in colors, Octavo. Cloth. Pp. 535. London: Charles Griffin and Company. Limited. Phila: J. B. Lippincott Company, 1899.

Progressive Medicine: A Quarterly Digest of the Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., professor of therapeutics and materia medica in the Jefferson Medical College, etc. Vol. ii, June, 1899. Surgery of the abdomen, including hernia; gynecology; diseases of the blood; dietetic and metabolic disorders; diseases of the spleen, thyroid gland, and lymphatic system; ophthalmology. Octavo. Cloth. Pp. 468. Philadelphia and New York: Lea Brothers & Co. 1899.

Deaths and Obituaries.

STEPHEN STEWART WHITE, M. D., U. S. N., died in Sitka, Alaska, May 30, of ptomain poisoning, at the age of 36 years. He was graduated from Columbia University in 1885, and, after service in the Bellevue Hospital and also the Johns Hopkins Hospital, he passed the naval examining board and was commissioned assistant-surgeon. He was assigned to the U.S. Steamship *Trenton*, which was wrecked in the harbor of Apia, Samoa, when he went to San Francisco in charge of the survivors. He later served on the Baltimore, at the Naval Academy, on the Pacific coast, and as surgeon of the *Thetis*, and in June, 1897, was ordered to the naval hospital at Sitka.

IRA DEWITTE BROWN, M.D., Albany, 1865, died at his home at Weedsport, N. Y., June 23, aged 69 years. He was for several years city editor of the *Utica Herald* and afterward editor of the *Oswego Times*, and for some time an Albany correspondent and also legislative reporter of the *Albany Journal*. In 1872 he was sent to the legislature to represent the northern district of Cayuga. At the time of his death he was editor of the *Cayuga Chief*.

WESLEY CLARK EARL, M.D., Buffalo, N. Y., died June 19, aged 64 years. During the Civil War Dr. Earl served as an army surgeon and was for a time stationed at Elmira. He had practiced in Buffalo for about twenty-five years.

NATHAN PRATT, M.D., Mildred, Del., died June 18. Dr. Pratt was 65 years of age and during the Civil War was surgeon in the United States Hospital at Philadelphia and later in the Sheridan Field Hospital at Winchester, Va.

WM. J. SCOTT, M.D., Philadelphia, a graduate of the medical department of the University of Pennsylvania, class of 1892, died June 18, aged 32 years.

E. H. FUHRMAN, M.D.—At the recent regular meeting of the Alumni Association of the Wisconsin College of Physicians and Surgeons, the following resolutions on the death of Dr. E. H. Fuhrman, in Grafton, Wis., May 26, were adopted:

Resolved, That in the death of Dr. Fuhrman, the Association has lost one of its most respected and valued members;

That the sympathy of the Association be extended to his family in their sad loss;

And finally, that these resolutions be published in the JOURNAL and spread on the minutes of the Alumni Association.

Resolved, That a copy of these resolutions be sent to his family.

OTTO KRUEGER, M.D., J. H. BLEKKING, M.D., } Committee.

John Isham, M. D., Louisville, Ky., June 22, aged 40 years. . . S. H. Keys, M.D., Monongahela, Pa., June 24, aged 67 years. . . Allen G. McConkey, M.D., Modesta, Ill., June 13, aged 28 years . . Henry S. McElmurray, Charleston, Mo., June 16, aged 28 years . . D. C. Strong, M.D., Chetek, Wis., June 20, aged 73 years . . Wm. T. Taplin, M.D., Cadillac, Mich., June 18, aged 77 years . . Walter M. Wright, M.D., Dartmouth, 1874, died June 24, at Orange, Mass., at the age of 53 years . . Francis J. Fella, M.D., Northwestern Ohio Medical College, 1891, died at Toledo, Ohio, June 17, as the result of a fall.

Miscellany.

Lawson Tait: Erratum.—In the obituary notice of Mr. Lawson Tait, in last week's JOURNAL, he was referred to as "friend and teacher" of Dr. Keith. This should read "friend and pupil."

Massage of the Stomach.—In chronic affections of the stomach, the effect of medication or local applications of nitrate of silver, etc., is much enhanced by brief massage of the organ.—Wegele: *Semaine Méd.*, No. 19.

Gonococci in Corpus Luteum Cysts.—E. Fraenkel domonstrated that these cysts develop from excessive proliferating processes in the follicular epithelium, and he now announces the discovery of gonococci in the suppurated cysts.—*Archiv f. Gyn.*, lvii, 3.

A Virile Veteran.—Joel Parker, aged 84 years, a veteran of the Civil War, was buried in Ocean Grove, N. J., June 11. He had been twice married and was the father of twenty-four children, all of whom were present at the funeral. The oldest child is 60 years of age and the youngest six months.

Varicose Ulcers and Nerve Stretching.—As stretching the nerve induces an excessive proliferation of the tissues in the part involved, Chipault has applied the process to the treatment of varicose ulcers, first stretching the nerve—usually the musculocutaneous—and then treating the ulcer, curetting or excising, and suturing the lips of the wound, if small.—*Semaine Méd.*, No. 18.

Pyohydronephrosis Evacuated Through Bronchi.—A man 43 years of age, with chronic renal lithiasis, and a fluctuating tumor in the region of the kidney, began to cough and expectorate a thin fluid which proved to be urine, while the tumor vanished, and the patient seemed to be restored to his former condition of health.—*Med. Obosrenje*, April.

Wet Sheet in Treatment of Hyperthermia.—According to the experience of Bevilacqua, a hydrotherapeutic measure fully as effective as cold baths, with none of their inconveniences, is to stretch a wet sheet five centimeters above the patient, who lies nude beneath it. The sheet is kept wet by spraying with water to which 10 per cent. ether may be added. He supplements the sheet with a hot-water bottle at the feet and ice to the forehead.—*Semaine Méd.*, May 31.

New Application of Heat in Gynecology.—C. Mirtl. Based on the principle of the thermophore, a metal or hard rubber obturator is filled with sodium acetate in a liquid form and inserted into the vagina. As the fluid solidifies it generates heat, producing a constant temperature of 58 C. All the inconveniences of hot-water irrigations for the purpose are avoided and the patient can readily insert the appliance without assistance.—*Wiener Med. Presse*, 1899, No. 16.

Treatment of Lupus with Potassium Permanganate.—Katschanowski reaffirms the benefits of the dry application of finely pulverized potassium permanganate to lupus, and reports thirty-six cases thus successfully treated. The layer should be several millimeters thick and a dry bandage applied. After the scab has fallen any indifferent dressing will complete the rapid cure. Sound tissue is not affected by it and it is equally efficacious for other tuberculous ulcerations and open cavities.—*Ljetopis. russkoi chirurgii, 1.*

Professional Phosphorism.—Courtois-Suffit asserts that aside from the necrosis of the jaw produced by the fumes of phosphorus through a carious tooth, and easily prevented by excluding persons with unsound teeth from the factories, there are no specific symptoms of phosphorus intoxication beyond the peculiar odor of the breath and urine, anemia, slight but rather frequent, especially among women, and possibly albuminuria, which is, however, always isolated, never accompanied by any other symptoms of Bright's disease. Other symptoms appearing are due to other causes, autointoxication, etc., and must not be attributed to the phosphorus, which does not specifically affect the general health.—*Presse Méd.*, May 3.

Sanitary Report of Havana, Cuba, May, 1899.—The chief sanitary officer of the city of Havana has reported 607 deaths during the month of May, 1899. The prominent items in his report are: tuberculosis, 92; enteritis, 80; heart disease, 48; malaria, 41; pneumonia, 34; meningitis, 31; cirrhosis of the liver, 18, and measles 13. Sixteen deaths were reported as from infectious fever, 11 from typhus, 5 from typhoid, 2 from gastric fever, and none from yellow fever, puerperal fever or scarlet fever. The number of sanitary reports received from sanitary inspectors during the month was 8138; the number of sanitary advices sent to property owners, 2685, and 543 cesspools cleaned. Disinfection was effected in the following instances: yellow fever, 2; typhoid fever, 15; infectious fever, 21; pernicious fever, 6; smallpox, 1; varioloid, 7; measles, 152; diphtheria, 18; typhus, 4; tuberculosis, 81; leprosy, 2; total, 309.

Sick-rates Among Troops in Cuba.—Major S. T. Armstrong, U. S. N., chief surgeon Department of Puerto Principe, has reported for the month of May, 1899, an average of 10 per cent present and absent sick, the average strength being 1278 men. The lowest rate was 8.4 on May 5, the highest 10.8 on May 16. There are a few cases of typhoid fever in the Eighth U. S. Cavalry and the Fifteenth Infantry, but the sick-rate of the former regiment has improved greatly of late. Both regiments moved into new barrack buildings during the month. All the troops in this department are now in barracks except a command of 124 men at Nuevitas. This command is under canvas but its barrack buildings are well advanced in construction. The Department is well supplied with surgeons, trained nurses, hospital-corps men, and medical and hospital supplies. The Department of the Province of Havana has a somewhat better showing for the month. Its lowest rate of sickness, including all sick present and absent, was 5.4 per cent. on May 5, and its highest 9.6 per cent. on May 12.

William F. Jenks Memorial Prize.—The fifth triennial prize of $500 will be awarded to the author of the best essay on "The Various Manifestations of Lithemia in Infancy and Childhood, with the Etiology and Treatment." The prize is open for competition to the whole world, but the essay must be the production of a single person, and must be written in the

English language or, if in a foreign language, accompanied by an English translation, and sent to the College of Physicians of Philadelphia, Pa., before Jan. 1, 1901, addressed to Dr. Richard C, Norris, Chairman of the William F. Jenks Prize Committee. Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. Unsuccessful essays, may be reclaimed by their respective writers, or their agents, within one year.

A Layman's View of Lawson Tait.—The great surgeon who passed away yesterday was beyond all question one of the men who helped to make Birmingham famous. At this moment, when private animosities and professional jealousies are laid aside, it is possible to form a dispassionate estimate of the man who fought death successfully for others, and yet has yielded himself to the fell destroyer while yet in the prime of middle life. Truly may it be said, "what shadows we are and what shadows we pursue." Lawson Tait was to be judged by none of the rules and laws by which men are measured for the Temple of Fame. He had his own way of doing everything; he had a marvelous aptitude for his profession, and a masterfulness that bent even his most resentful rivals to his will. He not only earned distinction by his skill; he filled the eye as a man of distinction, and no member of his profession stood out so conspicuously in manner, speech, and general appearance. He was something more than a celebrity; he looked one. There must be something exceptional in a man who comes to Birmingham from the far north without a friend; who starts in a modest private practice in a suburban road, and yet within ten years or so finds himself at the head of an important branch of the surgical profession with an income of ten thousand a year. In every quarter of the globe the magic skill of his operating knife had become almost a proverb. For one operation, which he performed in Italy, he received a fee which would serve as a good two years' income for an ordinary professional man. The Americans sent over their young and promising surgeons to study at the feet of the Birmingham magician. During Mr. Gladstone's last Government he had the opportunity of refusing the offer of a baronetcy. A man can not leap to greatness and great fees without provoking many jealousies, and perhaps, with all his skill, there was no man in England with more enemies, and this may be held to be possibly the greatest compliment that may be paid to his memory. There is this, at any rate, to be said, that he disclosed the possibilities of the knife for cases that had hitherto been looked upon as hopeless. A man who succeeds in this way does not always get his due. There are those who say that he was fond of operating for operating's sake. Others, whose opinion is quite as valuable, look upon him as one of the benefactors of the century. Women knew it must be a desperate case if Lawson Tait's services were required. For that reason they did not know whether to pray for him, or shudder at him. He had, like all masterful men, a fine contempt for the opinions of people who did not agree with him. And, as with most geniuses, there was an erratic turn in his composition. He took to his hobbies and his houses and his friends, in fits and starts, and gave them up just as suddenly and with just the same lack of system. He achieved much, but with a more discriminating balance he might have done much greater things, and died a much happier man. But he was naturally pugnacious, and no man can fight against his predominant nature. His last public act was to take part in a furious and bitter controversy with a well-known Birmingham physician. He dearly loved a tussle of this kind, and the longer and the stronger the better. Of late years he has not taken a prominent place in the social life of the town or its public and political movements. This was in many ways to be regretted, as there was no better speaker in Birmingham, no more generous man, and no man who took a breezier and a broader view of things. He started everything he undertook with an enthusiasm that was marvelous to watch. With him disappears a most interesting and remarkable figure, one who, beyond all dispute, has brought much distinction to the town.—*Birmingham (Eng.) Daily Mail*, June 14

Suture of Heart.—Ramoni (*Gaz. degli Osp.*, May 14) reports that a young man stabbed twice in the heart was brought to the hospital in a very anemic condition, and after cutting and turning back a large flap opening into the thorax, the wound in the pericardium was enlarged to 6 cm. and the two small wounds into the ventricle from which the blood was issuing "in waves" were sutured. The suture was laborious, as the passage of the first needle produced such energetic systole as to tear the stitch, and the upper wound became enlarged to 3 cm. while being tamponned with the fingers. The suture did not include the endocardium. The pericardium was sutured separately and as no blood had entered the pleural cavity and the patient was very weak, the flap was replaced without suturing either pleura or ribs. In forty-nine days the patient was dismissed entirely recovered. In the thirteen cases on record wounds of the left ventricle are more numerous and severe. In 14 per cent. of the cases in which recovery without intervention has been reported, organic lesions remain which must compromise life sooner or later.

The Index: a Suggestion.—With this number of the JOURNAL we send the index for the last volume. We believe this is as full and complete as it is possible to make it. We would call attention to the "authors' index" which, while it only covers a part of the half year, makes a list of about 1700 names. In the future we hope to make this list so complete that it shall include all authors of original papers published in the reputable medical journals of the country. This, with the cross-index of subjects will, we are sure, make a very valuable addition. In this connection we desire to make a suggestion; the half-yearly volume now makes a very large book, too large to handle easily when several volumes have to be searched. Often the indexes of several volumes have to be examined before the desired matter is found. The suggestion we make is that an extra copy of the index be kept, aside from the one bound in the volume, to be used in looking up subjects. In a few years the great value of this system will be appreciated in the economy of time and labor, the several indexes being kept together in a cover for the purpose. To accommodate those who desire to take this hint, we have had extra copies of the index printed which we will send on receipt of three two-cent stamps. This is not a money-making scheme on our part, as the cost of paper, printing, mailing and postage will be more than six cents. It is a scheme on our part, however, to assist our readers, by making available, with little labor, the large amount of information contained in the bound volumes.

Philadelphia.

MORTALITY STATISTICS.—The number of deaths for the week just closed numbered 379, a decrease of 44 over last week and of 8 over the corresponding period of last year. Of the total number of deaths, 122 occurred in children under the age of 5 years. The following were the principal causes: apoplexy, 12; nephritis, 31; cancer, 16; cholera infantum, 17; heart disease, 29; marasmus, 16; suicide, 2; sunstroke, 3; appendicitis, 4.

HOWARD HOSPITAL REPORT.—The 45th annual report of this hospital has just been issued. The number of patients admitted to the wards and private rooms was 399, as compared with 327 last year and 283 the year previous. The number of accident cases was 1618, as compared with 1525 for last year and 845 for the year 1897. The new patients were 8127, and visits to the hospital, 29,253.

Washington, D. C.

HEALTH OF THE DISTRICT.—The report of Health Officer

Woodward for the week ended June 17, shows the total number of deaths to have been 147: 84 white and 63 colored. At the close of the week there were 5 cases of smallpox, 25 of diphtheria and 68 of scarlet fever under treatment. During the week there were three fatal cases of cerebrospinal meningitis.

MEDICAL EXAMINERS APPOINTED.—The Commissioners of the District have appointed Drs. J. Taber Johnson and George N. Acker members of the Board of Medical Examiners for the term of three years. They also re appointed Dr. Henry B. Noble as a member of the Board of Dental Examiners.

TESTING POTOMAC WATER.—Colonel Smart, in charge of the Laboratory of the Army Medical Museum, is making a series of scientific tests of the Potomac water in the reservoir from which Washington is supplied. So far the bacteriologic tests show the water to be dangerously contaminated with sewage and a large proportion of colon bacillus.

Baltimore.

GARRETT FREE HOSPITALS FOR CHILDREN.—The annual report of the Garrett Free Hospitals for Children is out. There are two hospitals, one in Baltimore, the Robert Garrett Hospital for children, for winter use, and a sanitarium at Mt. Airy, Md., for the summer. The buildings were opened in 1888, and 1889. A dispensary is also open during the year. Cases of contagious diseases are excluded, but provision is made for the treatment of such cases arising in the hospital in an isolation ward. During the past year 227 children were admitted; there were 52 operations and 7 deaths. At the dispensary 1167 were treated.

CATTLE SLAUGHTERING.—The State Board of Health furnishes a report giving the result of an examination by sanitary inspectors of the various towns in Maryland in which the slaughtering of cattle is conducted. The report covers nearly all the towns having a population of over 500. At the great majority of slaughter-houses the offal is fed to hogs: the fats are also rendered at most of them. The report says in effect, slaughter-houses, unless conforming to sanitary regulations, are apt to become nuisances and menaces to health. The rendering of animal fats is always offensive although the influence on public health can not be clearly traced. Open kettles are unnecessary and should be forbidden. The fats can always be sold in the rough, to large establishments where they are separated in tight tanks with a minimum of offense and cost. Feeding slaughter-house offal to hogs is filthy and wasteful. Nuisance is bound to arise on such premises. Such pork is of poor quality and may be dangerous on account of the liability to trichinosis. There ought to be a law against feeding blood or other uncooked offal to hogs. This whole matter of the regulation of slaughter-houses needs to be taken up by the sanitary authorities of the towns and villages. The smaller towns have the best regulations. The best solution would be the establishment, near each town, of one properly conducted modern abattoir equipped to handle all the refuse in a cheap and profitable manner. Local butchers could effect a considerable saving by renting the privileges of a joint abattoir.

St. Louis.

RESIGNATIONS.—Drs. A. C. Bernays and I. S. Meisenbach of the St. Louis Medical College have resigned. Dr. H. C. Dalton of the same institution retired some weeks ago.

MARRIAGES.—Drs. Wheeler Bond of St. Louis and D. Bryson Delavan of New York City were recently married to daughters of representative St. Louis citizens.

MEDICAL SCHOOLS.—The recent consolidation of the St. Louis Medical and Missouri Medical Colleges, into the Medical Department of Washington University, makes a strong combination. The respective buildings and general equipments of the two schools are new and near to each other, as also are their clinics and hospitals, so that few cities in America now possess a more generously equipped or more liberally endowed medical college than St. Louis in the above consolidation.

DR. T. O. SUMMERS.—Members of the American Medical Editors' Association, and in fact, all physicians interested in American medical literature for the past twenty years, will probably recall Dr. Thomas Osmund Summers, whose death was noted in the JOURNAL last week. He for a number of years practiced and taught medicine in Nashville, Tenn., later lived in Florida, and for the past seven or eight years has been in St. Louis, acting as medical college teacher, practitioner and editor. He has been considered an expert on yellow fever for years, and has occasionally been called to the South in times of epidemics. He tendered his services as a yellow fever immune and expert on the breaking out of the Spanish war and was promptly given a prominent place in the medical service of the army. On retiring a few months ago he was honored with the title of surgeon-major. Dr. Summers was one of the most able and brilliant men in the medical profession of the South, possessed of a bright intellect, a congenial disposition and many engaging qualities. It has been the writer's pleasure to know him for more than twenty years. Pursued by ill-health, within a few years he has become a victim of the morphin habit, and this had dimmed the brilliancy of his mind, but never soured his gentle nature. As teacher, physician, friend, he was always true. As a head of a family he was gentle, kind, lovable and greatly beloved. At the last meeting of the Missouri State Medical Society, a paper which he had read and which bore some of the evidences of mental eccentricity, was by motion of a member rejected. Dr. Summers was present at the recent meeting of the AMERICAN MEDICAL ASSOCIATION in Columbus, and expressed to friends the sadness he felt over this action, together with the fact that he had been unable to secure appointment in the regular army as he had hoped to do.

MISSISSIPPI VALLEY MED. JOUR. ASSOCIATION.—The local medical journals of St. Louis recently organized under this name, inviting all medical journals located in the territory comprised in the Louisiana purchase to join them. The prominent objects of the organization are: the advancement of the medical profession, mutual good, and incidentally the promotion of the interests of the World's Fair to be held in St. Louis in 1903. The following officers were chosen: president, C. H. Hughes; vice-president, A. H. Ohmann-Dumesnil; secretary, T. A. Hopkins. The Association will hold an annual meeting and banquet during the meeting of the Mississippi Valley Medical Association in Chicago, October next.

Queries and Minor Notes.

TREATMENT OF CANCER.

WASHINGTON, MO., June 16, 1899.

To the Editor:—In the JOURNAL of April 29 (p. 934), mention is made of a paper by Wm. B. Coley on treatment of cancer past operation. Please send me this paper and advise me of any other literature that is worthy of recommendation bearing on the same subject. Yours truly, J. I.

Answer.—The paper referred to is the final one in the special cancer number (April, 1899) of the London *Practitioner*. It will be impossible for us to furnish it, but it can be obtained through the publishers, Cassell & Co. In the JOURNAL, Aug. 20 and 27, 1898, Dr. Coley published a very extensive paper on this subject, and still other articles by him appeared in 1893, 1894 and 1896 in the *Am. Jour. of the Med. Sci.*, *Medical Record*, *Bul. of the Johns Hopkins Hospital*, etc. Other papers on the subject in this JOURNAL are those of Dr. G. Betton Massey, on the electric treatment (April 23, 1898); Dr. Etheridge on treatment by calcium carbid, July 9, 1898; Dr. Emil Ries, Nov. 26, 1897; Wyeth, on treatment with toxins, June 30, 1898, etc.

Dr. C. D. Spivak has given a very good résumé of the Russian treatment with chelidonium, in the *Therapeutic Gazette*, Detroit, 1897, p. 229. Mention should also be made of an article by Dr. McFadden Gaston on the treatment of cancer by electricity, in the *Annals of Surgery*, 1897.

HYALINE CASTS.

DANVILLE, ILL., June 20, 1899.

To the Editor:—I want some information and am at a loss just where to get it on the spur of the moment. Can some few hyaline casts be present in otherwise normal urine and no kidney disease be present?—Question asked with reference to insurance companies. I should like your opinion

and reference literature named. Is not this opinion held by Dr. Haines of Rush Medical College?
E. A. J.

ANSWER.—The tendency at the present time seems to be to regard the presence of a few hyaline casts as no more significant than is sometimes a minute quantity of albuminuria. Haines and Skinner (JOURNAL, Jan. 29, 1898) state that with their very thorough method they may be found in the majority of cases, even in perfect health. It is not unreasonable to suppose that a very slight renal congestion or irritation without any symptomatic importance whatever may exist and give rise to the formation of these casts. The writers of books are, however, timid or cautious about expressing the opinion that any form of casts is without pathologic significance, and Edes (JOURNAL, Nov. 5, 1898) cautions against underestimating their importance, while admitting the above facts.

ROBERTS' LYMPH.

GALLATIN, MO., June 14, 1899.

To the Editor:—May I take the liberty to call your attention to the enclosed "hoary fake"—such a close neighbor—and ask what you know of Dr. Joseph R. Hawley, M.D., and the "Chicago Clinical School?" *O tempore! O mores!*
Truly yours,
W. L. B.

ANSWER.—The "Hoary Fake," as our correspondent calls it, is a pamphlet of fourteen pages entitled, "'The Roberts' Lymph Compound: Its Nature, Physiological Action and Therapeutic Value,' by Dr. Joseph R. Hawley, M.D., Professor Practice of Medicine and Physical Diagnosis, Chicago Clinical School. Dr. B. F. Roberts, Discoverer of the Lymph, Green City, Mo. Milan Institute, Dr. I. M. Roberts, Medical Director and Manager, Milan, Mo." The "Dr." in front and "M.D." at the end of each of the names is worthy of notice, and the general grammatic construction in the body of the pamphlet reflects the same indication of intelligence and education on the part of the author or authors. The lymph in question is taken from young goats, and consists of extracts derived from lymphoid tissue, and lymphocytes, fat and fixed tissue-cells from the lymphatic system, incorporated in lymph-plasms by an original process of unusual delicacy." "Another strength of lymph contains spermatosoo," although whether alive, embalmed or in what condition we are not informed. The action of the lymph is to "correct the effects of senility," certainly a most desirable and commendable thing to do, but not only will it do this, for "later he found that by increasing the strength of concentration of the lymph he could cure a few diseases of dissimilar pathology, as will be seen below." And "below" are given reports of cures, which are, to say the least remarkable. The treatment may be of some value, but the pamphlet indicates faddism, charlatanism and quackism together with strong prima facie evidence of ignorance.

I. M. Roberts is designated with a star in "Polk's Directory," and his location given as Green City, Mo., and not Milan; B. F. Roberts' name does not appear at all. Dr. Joseph R. Hawley was connected with the Chicago Clinical School, but is not now, according to a letter from the secretary of that school, which says: "Dr. Jos. Hawley is not connected with the Chicago Clinical School. His resignation as professor of internal medicine was accepted by the board of Directors, May 17, 1899."

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General of the U. S. Marine-Hospital Service, during the week ended June 24, 1899:

SMALLPOX—UNITED STATES.

District of Columbia: Washington, June 3 to 10, 1 case.
Florida: Jacksonville, June 3 to 19, 5 cases.
Georgia: Brunswick, May 16 to June 10, 6 cases; Macon, June 3, 2 cases; Savannah, June 14, 6 cases.
Illinois: Chicago, June 10, 1 case.
Indiana: Evansville, June 3 to 17, 4 cases.
Kentucky: Louisville, June 15, 5 cases.
Louisiana: New Orleans, June 16, 1 case.
Massachusetts: Boston, June 17, 1 case; Fall River, June 13, 2 cases.
Missouri: St. Louis, June 12 to 19, 9 cases.
New Jersey: Bloomfield Township, June 5, 1 case; Ocean Township, June 13, 24 cases: Ocean County, June 14, 1 case.
Ohio: Columbus, June 17, 3 cases.
Pennsylvania: Philadelphia, June 3 to 10, 21 cases; June 10 to 17, 17 cases.
New York: New York, June 17, 5 deaths.
Virginia: Norfolk, June 19, 1 case.
Wisconsin: Milwaukee, June 17, 1 case, 1 death.

SMALLPOX—FOREIGN.

Belgium: Antwerp, May 27 to June 3, 1 case.
Brazil: Bahia, May 29 to June 3, 1 case.
England: London, May 27 to June 3, 1 case; Liverpool, May 27 to June 3, 4 cases.
India: Bombay, May 16 to 23, 11 deaths; Calcutta, May 6 to 13, 1 death.
Greece: Athens, May 27 to June 3, 16 cases, 7 deaths.
Mexico: Chihuahua, June 3 to 10, 1 death: Neuvo Laredo, May 27 to June 3, 2 deaths.
Russia: Moscow, May 20 to 27, 15 cases, 3 deaths; Odessa, May 27 to June 3, 10 cases, 1 death; St. Petersburg, May 20 to 27, 18 cases, 2 deaths; Warsaw, May 11 to 18, 1 death.
Turkey: Constantinople, June 1 to 7, 1 death; Smyrna, May 14 to 21, 2 deaths.
Uruguay: Montevideo, May 6 to 13, 4 deaths.

YELLOW FEVER.

Brazil: Bahia, May 20 to 27, 101 cases, 34 deaths.
Colombia: Panama, June 13, 18 cases, 9 deaths.
Cuba: Puerto Principe, June 21, 2 cases, total 3 cases; Santiago, June 16 to 19, 7 cases, 2 deaths.
Mexico: Tampico, June 5, 1 case; Vera Cruz, June 8 to 15, 117 cases, 61 deaths.

CHOLERA.

India: Bombay, May 16 to 23, 1 death; Calcutta, May 6 to 13, 27 deaths; Karachi, April 24 to May 1, 1 case; Moalmein, April 15 to 30, epidemic.

PLAGUE.

India: Bombay, May 16 to 23, 174 deaths officially reported, probably 500; Calcutta, May 6 to 13, 55 deaths; Kurrachee, April 9 to 16, 203 deaths; District of Kurrachee and Province of Sindh, April 24 to May 1, 251 cases, 175 deaths; Mauritius, May 1, 3 cases.

The Public Service.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., to and including June 22, 1899:

Thomas W. Bath, acting asst.-surgeon, from La Harpe, Ill., to Fort Leavenworth, Kans., to accompany Troop F, 6th Cav., to San Francisco, Cal., and for assignment to duty in the Dept. of California.

Joseph L. Bell, acting asst.-surgeon, from French Lick, Ind., to San Francisco, Cal. for duty in the Dept. of California.

Allen J. Black, acting asst.-surgeon, from East Radford, Va., to Willetts Point, N. Y., to accompany Co. B, Batt. of Engineers to San Francisco, Cal., and for subsequent assignment in the Department.

Charles A. Cattermole, acting asst.-surgeon, from Lansing, Mich., to San Francisco, Cal., for assignment in the Department.

Henry C. Cline, acting asst.-surgeon, from Camp Meade, Pa., to Fort Royal, Va., for annulment of contract.

Vernon K. Earthman, acting asst.-surgeon, from Murfreesboro, Tenn., to San Francisco, Cal., for duty in the Department.

Edwin F. Gardner, major and surgeon, U. S. A., leave of absence granted.

John N. Hereford, acting asst.-surgeon, from Baden, St. Louis, Mo., to San Francisco, Cal., for duty in the Department.

Donald P. McCord, acting asst.-surgeon, sick leave extended.

John A. Metzger, acting asst.-surgeon, from Latrobe, Pa., to San Francisco, Cal., for duty in the Department.

William Grey Miller, acting asst.-surgeon, from Newcastle, Pa., to San Francisco, Cal., for duty in the Department.

H. H. Rutherford, acting asst.-surgeon, from Joplin, Mo., to San Francisco, Cal., for duty in the Department.

James C. Shellenberger, acting asst.-surgeon, from Piqua, Ohio, to San Francisco, Cal., for duty in the Department.

Charles H. Stone, acting asst.-surgeon, from Clinton, Mo., to San Francisco, Cal., for duty in the Department.

Joseph J. Wilson, acting asst.-surgeon, from New York City to Flushing, Ohio, for annulment of contract.

Movements of Navy Medical Officers.—Changes in the medical corps of the U. S. Navy for the week ending June 24, 1899:

Surgeon L. W. Atlee, detached from the "Boston" and ordered to the "Bennington."

P. A. Surgeon R. B. Ward, detached from the "Bennington" and ordered to the "Boston."

Asst.-Surgeon F. M. Furlong, detached from the "Independence" June 30, and ordered to the "Solace" temporarily, for passage to the Asiatic Station.

Surgeon C. G. Herndon, on completion of temporary duty at recruiting rendezvous at Chicago, Cleveland, Ohio, etc., ordered home to await orders.

Medical Inspector R. A. Marmion, detached from the Washington navy yard, July 1, and ordered home and to await orders.

Surgeon S. H. Dickson, ordered to the Washington navy yard, July 1.

Marine-Hospital Changes.—Official List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the U.S. Marine-Hospital Service, for the seven days ended June 22, 1899.

Surgeon Fairfax Irwin, granted leave of absence for three months from July 8, 1899, with permission to go beyond the sea.

Surgeon H. R. Carter, detailed as quarantine officer of the port of Havana, Cuba, under the provisions of executive order of Jan. 17, 1899.

Surgeon C. E. Banks, to proceed to New York City, for special temporary duty.

P. A. Surgeon C. P. Wertenbaker, to proceed to Danville, Va., for special temporary duty.

P. A. Surgeon A. C. Smith, granted leave of absence for thirty days from July 15, or when relieved.

P. A. Surgeon W. J. S. Stewart, granted leave of absence for fifty-two days from June 19, 1899.

Asst.-Surgeon L. B. Cofer, to proceed to El Paso, Texas, as inspector; to proceed to Mexico for temporary duty.

Acting Asst.-Surgeon H. C. Sibree, granted leave of absence for ten days from June 21, 1899.

Acting Asst.-Surgeon H. C. Wakefield, granted leave of absence for thirty days from June 15, 1899, on account of sickness.

Hospital Steward and Chemist Henry Gahn, to proceed to New York City on special temporary duty.

Acting Asst.-Surgeon W. C. Mason, granted leave of absence for six days from June 26, 1899.

PROMOTION.

Junior Hospital Steward Charles Slough, to be senior hospital steward.

RESIGNATION.

P. A. Surgeon W. J. S. Stewart, resignation as P. A. Surgeon accepted as tendered, by direction of the President, to take effect Aug. 9, 1899.

CHANGE OF ADDRESS.

Brueker, C. M., from Pasadena, Cal., to Canon City, Colo.
Bass, H. H., from Richmond, Va., to Henderson, N. C.
Chase, Wm., from 2947 Laclede to 4479 St. Louis Ave., St. Louis, Mo.
Dickson, W. L., from 124 Baronne, to 3439 St. Charles St., New Orleans, La.
Ewing, E. W., from 236 Winchester Ave., to 694 Adams St., Chicago.
Frahm, N., from Chicago to Tuscola, Ill.
Heger, L. A., from 1901 I St. N. W., to 1814 G St. N. W., Washington, D.C.
Hoxie, W. E., from Chicago to Hampton, Ia.
Langham, W. H., from Philadelphia to Manor Station, Pa.
Mason, L. D., from Brooklyn, N. Y., to Greenwich, Conn.
Mulick, J. W., from Chicago to Riceville, Ia.
Parker, J. O., from Ann Arbor, Mich., to La Salle, Ill.
Plummer, R. W., from 47 W. 71st St., to 48 W. 91st St., New York.
Pickles, W. B., from Joliet to La Salle, Ill.
Rohlabaugh, E. E., from Watseka to 4308 Langley Ave., Chicago.
Race, W. F., from Omaha, Neb., to Binghamton, N. Y.
Rowe, S. B., from 3437 Bell Ave. to 719 Pine St., St. Louis, Mo.
Stone, I. S., from 2305 to 3044 14th St., Washington, D. C.
Spivak, C. D., from Denison to Nevada Block, Denver, Colo.
Samson, C., from Chicago to Provo City, Utah.
Underwood, A. M., from Lancaster, Pa., to Grove Beach, Conn.
Wheeler, A. C., from Saratoga, Wyo., to Leboeuf, Pa.
Wilder, L., from Chicago to Dunlap, Ill.
Whittaker, J. T., from Cincinnati, O., to Lakewood, N. Y.
Wright, J. B., from Richmond, Va., to Cohasie, N. C.